

EXHIBIT FF

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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

Before The Honorable James Donato, Judge

IN RE GOOGLE PLAY STORE)	
ANTITRUST LITIGATION,)	
)	NO. 21-md-02981-JD
)	
THIS DOCUMENT RELATES TO:)	
)	
EPIC GAMES, INC.,)	
)	
Plaintiff,)	
)	
VS.)	NO. 20-cv-05671-JD
)	
GOOGLE, LLC., et al.,)	
)	
Defendants.)	
)	

San Francisco, California
Thursday, May 23, 2024

TRANSCRIPT OF PROCEEDINGS

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Matthew Gentzkow
Gregory Leonard

Thursday - May 23, 2024

11:10 a.m.

P R O C E E D I N G S

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THE CLERK: All rise. Court is now in session. The Honorable James Donato presiding.

THE COURT: Good morning.

ALL: Good morning.

THE CLERK: Please be seated.

Calling Civil 20-5671 Epic Games, Inc., v. Google, LLC, and Multi-District Litigation 21-2981, In Re: Google Play Store Antitrust Litigation.

Counsel.

MR. BORNSTEIN: Good morning, Your Honor, Gary Bornstein for Epic Games. I am joined today back in the gallery by Yonatan Even, Lauren Moskowitz, Michael Zaken, and Malikah Williams.

THE COURT: Okay.

MR. POMERANTZ: Good morning, Your Honor, Glenn Pomerantz on behalf of Google. And with me, not at counsel table Leigha Beckman, Dane Shikman, Kuru Olasa, Jonathan Kravis. Sujal Shah, as well, Your Honor.

THE COURT: Okay. It's a partner name test.

(Laughter.)

THE COURT: All right. We're all set?

MR. BORNSTEIN: Yes, Your Honor.

1 THE COURT: Who did we have at the table? I know the
2 two economists and --

3 MR. BORNSTEIN: And Mr. Lyon will not be speaking,
4 but. He is here in case we need some technical assistance.

5 THE COURT: Okay. Let's just introduce who's sitting
6 at the table, please. Why don't we start with you.

7 MR. BORNSTEIN: Great. On our side, we have Professor
8 Steven Tadelis and Professor Douglas Bernheim.

9 THE COURT: Okay.

10 MR. POMERANTZ: We have here, Your Honor, Professor
11 Mathew Gentzkow and Dr. Greg Leonard.

12 THE COURT: All right. So we're going to do this in a
13 hot tub style. So, Lawyers, you two can return to the bench.
14 And let me put a frame on what we're doing.

15 So today I've asked you in to take testimony on the
16 injunctive relief that I'm going to order in the wake of the
17 jury verdict. Now there are going to be two principles, two
18 broad principles that guide our discussion today. And the
19 first principle is:

20 We are not writing on a clean slate. The jury has
21 concluded that Google monopolized illegally the Android app
22 distribution market and the Android in-app billing services
23 market for digital goods. The facts and the evidence behind
24 the jury's verdict are now carved in stone. This is not an
25 opportunity to argue with that record, to try to supplement it,

1 to try to get around it, tap dance on it, or anything else. It
2 is here and it is here to stay.

3 I was a little concerned about Google's 90 pages of
4 objections to the proposed injunction that the plaintiffs
5 submitted because it came perilously close to crossing that
6 line on several occasions. But we will not be doing that
7 today.

8 Now, there may be some fact disputes that are specific to
9 the relief that I need to decide. I'll tip my hand a little
10 bit and tell you right now, the friction related to the
11 security screens may be one of them that was not in it. We
12 heard a lot about it a trial. That was not an issue that the
13 jury necessarily had to decide.

14 So I may end up having to do some relief-specific dispute
15 resolution, but that is it. We are not in any way rewriting
16 history or revisiting what led to the jury's verdict of illegal
17 monopolization.

18 The second guideline is, I'm going to share with you the
19 legal standards I'm working under. And I know you-all
20 economists aren't lawyers, but you need to know what I'm going
21 to be doing because this is how I'm going to hear what you're
22 saying to me. And I have picked, out of a number of sources, a
23 formulation that Justice Douglas gave in *Ford Motor Company v.*
24 *United States*, 405 U.S. 562 at pages 577, 578, and that's from
25 1972.

1 And Justice Douglas formulated the relief task as this (as
2 read) :

3 "Antitrust relief should unfetter a market from
4 anticompetitive conduct and pry open to competition a
5 market that has been closed by defendant's illegal
6 restraints."

7 That is the lens through which I'm going to be taking your
8 testimony today.

9 To put a little bit of a finer point on it, our circuit
10 recently held in a case called *Optronic Technologies, Inc., v.*
11 *Ningbo* -- N-I-N-G-B-O -- *Ningbo Sunny Electronic Company*,
12 20 F.4th 466 at page 486. This is a 2021 case. (as read):

13 "If the jury finds that monopolization or
14 attempted monopolization has occurred, the available
15 injunctive relief is broad, including to terminate
16 the illegal monopoly, deny to the defendant the
17 fruits of its statutory violation, and ensure that
18 there remain no practices likely to result in
19 monopolization in the future."

20 So those are my goals. You're going to help me make my
21 decision about what I should or should not do to realize the
22 legal standards that I'm operating under.

23 Now, the other thing I want to mention -- it goes without
24 saying, but I think it's important to emphasize -- this case is
25 about the opportunity to compete generally; it is not about

1 aiding a specific competitor for or potential competitor. I am
2 not looking for relief that's going to give a helping hand just
3 to Epic. That is not what I'm doing. That's the wrong thing
4 to do.

5 What we are doing is leveling the playing field, lifting
6 the barriers, and making sure that anybody who chooses to
7 compete with Google in these two markets found by the jury has
8 a free and unfettered opportunity to do so.

9 That is what I'm looking for. So it is a systemic remedy.

10 Now, I am going to turn it over to each of you. We're
11 going to, as I said -- I know at least a couple of you were
12 here for the prior hot tub -- start with the plaintiffs and
13 we'll get a response from the defendant as kind of we go down
14 this. But here is what I'm looking for: I'm looking for
15 specific actions.

16 All right?

17 I thought, to be honest, the draft -- proposed draft
18 injunction from Epic was too open-ended for my taste. That's
19 not something -- it's not a criticism, but I'm telling you what
20 I need is specific recommendations for action that are directed
21 to two things: Terminating Google's illegal conduct --
22 all right? -- making sure that door is closed. Everything that
23 led up to the antitrust verdicts.

24 And the second thing is: What should be done in addition
25 to that to restore the opportunity to compete for all potential

1 competitors.

2 All right? Those are the two touchpoints that I want you
3 to -- as you talk today and discuss this, keep that in mind.

4 Okay? So specificity is what I'm looking for --
5 all right?-- to the extent you can do it.

6 Okay. Now, it seems to me -- I don't want to in any way
7 constrain your testimony. It seems to me that identifying what
8 we can proscribe as prior conduct might be relatively easy. By
9 that, I have in mind specific contractual provisions that we
10 heard a lot about at trial, for example.

11 The next step, you know, what to do to make sure that
12 Google doesn't keep the fruits of its illegal conduct and
13 doesn't continue to poison the well in the future might be a
14 little bit more broad. Okay?

15 But let me start with the plaintiffs. You can just dive
16 right in.

17 DR. BERNHEIM: Okay. Thank you, Your Honor. I am
18 Douglas Bernheim.

19 THE COURT: Okay. And before we do that, let me --
20 because we're already broadcasting on Zoom. The two cameras
21 should be facing the two witnesses. So one, I think, is facing
22 the podium right now. So maybe Mr. Bornstein can help reorient
23 that and maybe have to lower it a little bit.

24 Yeah. That'd be great.

25 And then Mr. Pomerantz can do the same for -- good. Okay.

1 Can we look on the screen, Lisa, and make sure that
2 they're looking right? Okay. That looks pretty good. Okay.

3 All right. And just when you speak -- I know there's only
4 one microphone, but if you have to pass it back and forth, that
5 would be great. Okay.

6 Please go ahead, Professor.

7 DR. BERNHEIM: Of course. Thank you.

8 So I have prepared some slides that are -- well, frankly,
9 I think they're more for helping me with memory, but it may be
10 useful for you to be able to see them, too, because they have
11 terse summaries of the points that I'm making.

12 So, Mr. Lyon, could you put up Slide Number 3?

13 THE COURT: Is there a hard copy I could get, or no?

14 DR. BERNHEIM: There is. We can provide it. I'm sure
15 we can.

16 THE CLERK: Do we have two hard copies?

17 THE COURT: Two, if you have them, but at least one,
18 please.

19 Don't give me yours.

20 DR. BERNHEIM: I have two.

21 THE COURT: You do? Okay. That would be great.

22 Thanks.

23 All right. Thank you. Okay.

24 Dr. Bernheim, go ahead.

25 DR. BERNHEIM: All right. So this slide just lists

1 the categories of things that we think a remedy needs to do
2 beginning with Item Number 1 -- is to prohibit the specific
3 anticompetitive practices. But a remedy that focuses very
4 narrowly, just on those specific things, is going to be easily
5 circumvented. So the remedy needs to preclude categories of
6 things, and I'll be more specific about that, what those
7 categories are in a minute.

8 So that's the -- Point Number 2. It must preclude related
9 conduct that could yield substantially similar outcomes.

10 Third, it has to give rise to an opportunity to compete on
11 the merits with Google Play, despite the ongoing competitive
12 advantages that Google Play enjoys by virtue of its past
13 anticompetitive action, because there are durable effects of
14 that on competition going forward.

15 And the last principle just says that, to the extent
16 possible, we should avoid inhibiting Google from competing on
17 the merits.

18 So the next slide, Slide Number 4, gives a high-level
19 summary of what the components of the remedy are. And then
20 just to look forward, if you look at the next few slides -- so,
21 for example -- I'm sorry.

22 On Slide 4, the first point is to prevent Google from
23 entering into or enforcing agreements of the type the jury
24 found to impair competition.

25 The next slide has that as its title. That would be Slide

1 Number 5. And it lists the specific things that we think fall
2 into that category.

3 And then there's a slide for each of the other points on
4 Slide Number 4.

5 So Number 1, preventing Google from entering in or
6 enforcing agreements of the type that were found to impair
7 competition.

8 Second, to prevent Google from imposing undue restrictions
9 on direct downloading.

10 Third, to require nondiscriminatory access to Android and
11 other Google products and services, because that's another
12 possibility for circumvention if Google were to make those
13 things contingent --

14 THE COURT: So is that just -- is that the security
15 friction point?

16 DR. BERNHEIM: It's also possibly access to APIs.

17 THE COURT: Okay.

18 DR. BERNHEIM: Which are not currently conditional but
19 could be made conditional.

20 THE COURT: All right.

21 DR. BERNHEIM: And then the final point is to mitigate
22 the continuing competitive advantages, which we have several
23 provisions designed to address those.

24 So I'm not sure if it's best to walk through every one of
25 these points --

1 THE COURT: You know, I have the draft. I've studied
2 it quite a bit. I would like to get just to the specifics.

3 DR. BERNHEIM: Okay.

4 THE COURT: You can use your topic headings. That's
5 actually useful. But how -- what would you stuff under
6 Number 1, for example?

7 DR. BERNHEIM: Okay. So let me -- let me make what I
8 think is the most useful characterization of what's included
9 under Number 1.

10 What we are concerned about is two types of conduct:

11 The first type of conduct is conduct that makes value --
12 which could be financial value, it could be other value --
13 conditional upon another party either dealing with a Google
14 Play rival or acting as a Google Play rival.

15 And this sort of conduct, for the most part, is easy to
16 identify because the agreements would have provisions in them
17 that reference rivals. Okay? They would say these things are
18 conditional in some sense.

19 It gets a little bit tricky because in some cases
20 conditionality can be established by a nod and a wink, and --
21 particularly, if a party has a lot of power, if they're
22 dominant in the market and parties are worried about pleasing
23 them.

24 So we add one more thing: Beyond this, you can't write
25 things that are conditional upon -- you know, value can't be

1 conditional upon dealing with a rival or acting as a rival. We
2 also suggest that the remedy should include the requirement
3 that these agreements have an explicit provision that says, "No
4 terms or conditions or renewal are conditional upon dealing
5 with a rival or acting as a rival," so that the counterparty,
6 if it's an OEM, if it's a developer, they know that's in the
7 contract; they have recourse and they have reassurance.

8 THE COURT: All right. Now, let's just tie this a
9 little bit to the trial evidence that I hope you recall.

10 DR. BERNHEIM: Yes.

11 THE COURT: So the MADA and RSA agreements, as I
12 recall, arguably had clauses about not doing business with
13 rivals or putting Google in a position where it always came out
14 first if there was some dealing with a rival, a home screen or
15 priority.

16 So what specifically -- keeping those actual contracts
17 that we heard about at trial in mind, how would you formulate a
18 proscription related to those?

19 DR. BERNHEIM: Well, I think you can formulate a broad
20 proscription that doesn't need to specify every specific
21 category of conduct because there are a lot of categories of
22 conduct, and there are other things that Google could turn to.

23 So the ideal, in my mind -- and I'm talking as an
24 economist now --

25 THE COURT: Of course, yes.

1 DR. BERNHEIM: The ideal, in my mind, would be to have
2 a provision that simply says broadly, "The agreements with
3 parties like OEMs, developers, others who might be
4 distributors, cannot include provisions that specify terms that
5 are conditional on dealings with a rival or acting as a rival."

6 THE COURT: All right. Well, can't it be conditional
7 on excluding a rival?

8 DR. BERNHEIM: Well, that would be -- that would be --
9 excluding a rival would be the most extreme example. But
10 another example would simply be if you deal with a rival, then
11 you're not going to have access to certain things that are
12 valuable.

13 That would be a concern that Google could begin to use
14 that strategy.

15 THE COURT: So maybe one way to put it would be:
16 Cannot be conditioned on agreements with rivals or potential
17 rivals.

18 Just leave it at that.

19 DR. BERNHEIM: Yes. That's essentially what -- what
20 this is trying to get at. And I'm not sure exactly what the
21 wording should be, but if the provision is crafted in a
22 relatively broad way, it's still specific. It still says that
23 a violation would have to be -- to have a violation, you'd have
24 to be able to point to a provision in a contract that
25 explicitly references some sort of dealings with a rival.

1 THE COURT: And in your review as an economist, that
2 would directly redress the contractual restrictions that the
3 jury saw at trial?

4 DR. BERNHEIM: Yes, with one category of exceptions
5 that I'm coming to.

6 THE COURT: Okay.

7 DR. BERNHEIM: And the second category is the sharing
8 Google Play --

9 THE COURT: If I may just jump in -- so we really need
10 to tie all of this to the anticompetitive conduct that was
11 proven at trial.

12 DR. BERNHEIM: Right.

13 THE COURT: So that's why I'm going to ask you to make
14 sure that everything you tell me is, in fact, economist
15 response --

16 DR. BERNHEIM: Yes.

17 THE COURT: -- to the anticompetitive conduct,
18 contract agreements, and other conduct that we saw at trial.

19 Okay?

20 DR. BERNHEIM: Yeah. So a great example of this first
21 thing, the conditionality, is the RSA 3.0 agreements that said
22 to the OEMs, "Your compensation, your payments are going to be
23 different if you -- if you have -- if you preload a rival app
24 store."

25 That's a perfect example of a conditional provision in an

1 agreement. And I think one could broadly say that such
2 conditional provisions that reference dealings with rivals or
3 activities as rivals, are contrary to the remedy. And that
4 would not just deal with a lot of what we saw, that Google did,
5 at trial, but would also encompass alternatives that Google
6 might think about going to.

7 THE COURT: Before we get to that next point, though,
8 let's define "rival."

9 So a rival would be who?

10 A company seeking to open a competitive -- seeking to open
11 an Android app store?

12 DR. BERNHEIM: That would be the main class of rivals.

13 In principle, it could be if a developer is distributing
14 off Google Play, then it is acting as a rival for the purpose
15 of its own distribution, even though it doesn't have its own
16 app store. And the -- what would be required is a provision
17 that says, "Google cannot make value that it gives to that
18 developer" --

19 THE COURT: If I may -- I'm going to interrupt you a
20 lot. I apologize in advance.

21 So I see. So it doesn't have to be opening up -- I'll
22 just call it a macro store. It can be one developer saying, "I
23 want my app to be available through my own direct download or
24 through Samsung" or something like that.

25 That would be, in your view, also a rival?

1 DR. BERNHEIM: Yes. I think that that's important.

2 These are all activities that are rivalrous in terms of
3 app distribution, and we're only talking about rivalry in terms
4 of app distribution, so this ought to be focused on that.

5 But -- yes, that's the essence of it.

6 THE COURT: You said you had something else, a
7 carve-out or something --

8 DR. BERNHEIM: Yes. The other -- it's not a
9 carve-out. It's another category of conduct that arose at
10 trial, which is sharing Google Play revenues with actual or
11 potential competitors. And even when Google does not have
12 explicit provisions in contracts that reference activities
13 as -- as rivals or dealings with rivals, app distribution
14 rivals. It also has --

15 THE COURT: Was Activision -- what were the examples
16 at trial of that? I remember --

17 DR. BERNHEIM: This would be RSA 3.0, revenue sharing,
18 Google Play revenue sharing. Now, in the RSA 3.0 agreements,
19 there were various different kinds of revenue sharing.
20 Sometimes they shared, I don't know, search revenue, ad
21 revenue, something like that and occasionally Google Play
22 revenue.

23 And the sharing of Google Play revenue was coming up in
24 the context of OEMs that had their own app stores, which was
25 essentially sharing profits with a rival. This is, you know,

1 kind of basic violation of antitrust principles.

2 Nothing was made conditional on the -- well, I'm sorry.
3 The RSA 3.0 also had some conditionality. But for this
4 provision, even aside from the conditionality, sharing profits
5 with a rival discourages the rival from competitive action.

6 THE COURT: Sharing Play Store profits.

7 DR. BERNHEIM: I'm sorry?

8 THE COURT: Sharing Google Play Store profits.

9 DR. BERNHEIM: Specifically Play Store profits.

10 THE COURT: All right. So that is your formulation of
11 how to address the prior anticompetitive conduct that led to
12 the jury verdict?

13 DR. BERNHEIM: Yes, as well as similar conduct that
14 could be used to accomplish the same objective.

15 THE COURT: All right. Let me just turn to your
16 colleagues here.

17 What's wrong with that, Defendants? It sounds fairly
18 reasonable and well-targeted to the evidence at trial.

19 DR. GENTZKOW: Yeah, I think --

20 THE COURT: Why don't you say who you are.

21 DR. GENTZKOW: Matthew Gentzkow.

22 So we, I think, broadly agree on some of the high-level
23 principles that this should address the conduct that was found
24 to be illegal at trial. I think it's important that it do so
25 in a way that lets market outcomes be determined by competition

1 and market forces when possible.

2 I think that it's important, as Dr. Bernheim and
3 Dr. Tadelis have both said, that it preserve Google's ability
4 to compete in the market to the extent possible.

5 I think there's two main areas of disagreement. One of
6 them is with regard to some of the provisions that Dr. Bernheim
7 has described as leveling the playing field, which we haven't
8 really gotten to yet --

9 THE COURT: All I want you to do now is -- you know,
10 Dr. Bernheim said, "Here's what I would recommend, to terminate
11 the illegal conduct underlying the jury's monopolization
12 verdict."

13 So what I'm asking you is: Is there any objection to
14 that?

15 It sounded all quite straightforward. I don't see how
16 that would hobble Google's ability to compete in a fair way,
17 but you tell me.

18 DR. GENTZKOW: I think the first thing to say is that
19 the state settlement already rules out any exclusivity
20 agreement.

21 THE COURT: There is no state settlement because I
22 haven't approved it. So let's just stick with this case.

23 DR. GENTZKOW: The one thing that I think would be an
24 appropriate remedy is, as is in the state settlement, ruling
25 out exclusivity of either pre-installation or placement on home

1 screens of devices, those kinds of contracts that are
2 explicitly conditioned on the behavior of rivals.

3 I think that where we disagree is the breadth of that
4 provision, how far it goes and what other conduct should be
5 ruled out. I think that the -- the proposed injunction spans
6 conduct that even would disincentivize a rival in any way
7 from --

8 THE COURT: Let me just jump in.

9 Let's just focus on what we're talking about here. Okay?

10 So let's see if I can put a clearer articulation.

11 Dr. Bernheim has just proposed, in response to my
12 question, two categories of things that should be proscribed,
13 in other words, Google should be forbidden to do.

14 One is: It cannot condition any of its agreements with a
15 party on not dealing or having agreements or interactions with
16 rivals or potential rivals, and it can't engage in revenue
17 sharing from the Google Play Store with competitors.

18 So just focusing on those two things, I don't see any
19 reason why that would in any way unduly or unreasonably
20 constrain Google's ability to compete, while at the same time,
21 those provisions seem well-crafted to the evidence at trial to
22 correct the illegal conduct that led to the monopoly verdict.
23 So that's what I want you to kind of focus on.

24 DR. GENTZKOW: So I think on the sharing of revenue
25 from the Google Play Store, the question is to what extent that

1 prohibits conduct that would fall within the bounds of
2 competition. So there are a lot of cases in which it makes
3 sense for Google to offer to, for example, OEMs, when it's
4 competing for space on their devices, incentives to choose the
5 Play Store to install the Play Store. That has taken the form
6 of revenue-sharing contracts in the past, and those revenue
7 sharing contracts involve incentives for those OEMs to install
8 Google Play Store.

9 THE COURT: But isn't that incentive based on not
10 installing a rival store? I mean, that's the whole point of
11 the incentive; right?

12 DR. GENTZKOW: Well, not necessarily. I think that's
13 the crux of the question is: What about incentives that are
14 not conditioned on anything about the behavior of rivals?

15 I think if we narrowly --

16 THE COURT: Just to jump in, I'm looking in a
17 pragmatic way as what is the consequence. Okay?

18 So, you know, someone may say, "Oh, this is revenue
19 sharing with an OEM because we want to be on the home screen."

20 But if the practical effect is the revenue sharing is
21 essentially motivating an OEM not to put a rival play store on,
22 you have achieved an anticompetitive goal, even though it may
23 be cloaked in a competitive-phrased way.

24 So looking at the actual result, help me understand how
25 revenue sharing from the Google Play Store with a potential

1 competitor that results in the competitor not posting a rival
2 play store is not a reasonable way of constraining
3 anticompetitive conduct.

4 DR. GENTZKOW: Yeah. I think that -- I think that
5 banning that kind of revenue sharing has the potential to harm
6 those OEMs. Because although there could be cases where that
7 is excluding a competitor, there's a whole range of cases in
8 which that is a form of competition. And --

9 THE COURT: What's a form of competition?

10 DR. GENTZKOW: That offering revenue sharing to OEMs
11 in exchange for placing a play store, if there's no reference
12 to rivals, ruling that out entirely, has the potential to shut
13 down competition much more broadly in the market and harm
14 competition because there are lots of cases in which OEMs have
15 scarce real estate on their devices that is -- that app stores
16 are competing for placement on those devices. And if this
17 is -- if we say there's no ability to offer revenue sharing at
18 all in part of that competition, competition is going to be
19 weakened as a result.

20 THE COURT: All right. Let's pause on that.

21 Dr. Bernheim, your colleague is saying that it's too
22 broad. They should be allowed to revenue share because there
23 are totally legitimate reasons for that.

24 DR. BERNHEIM: Well, I disagree with that.

25 Dr. Gentzkow, in his testimony just now and in his

1 declaration in making that argument, doesn't explain what the
2 harm would be if the compensation to the OEM is something other
3 than Google Play revenues.

4 As I said before, they can share other revenue streams, so
5 they can make payments for various things. I mean, we're
6 proscribing some things, payments for things that are
7 conditional on dealing with a rival. But to the extent they
8 are allowed to do something, they can bid for that with other
9 revenue streams. It doesn't have to be Google Play revenue.

10 And I would add to that --

11 THE COURT: So you're really anchoring it to the
12 source of the revenue coming from Google Play.

13 DR. BERNHEIM: For that, again --

14 THE COURT: The revenue sharing.

15 DR. BERNHEIM: -- two categories of conduct. But if
16 we're talking about revenue sharing, what we're worried about
17 is Google Play revenue because Google Play is functioning as a
18 competitor in the app distribution market, and therefore should
19 not be allowed to share its revenues or profits with other
20 competitors in the app distribution market. That's -- that's
21 the line.

22 The other thing that I would point out is that -- at trial
23 I think I talked about this -- I've looked at the agreements
24 with the various OEMs, and the thing that's really striking is
25 that Google Play -- Google used various kinds of compensation.

1 They shared various different kinds of revenue streams.

2 Where you see them sharing Google Play revenue --
3 particularly Google Play revenue at high rates -- is when you
4 have the, you know, the Chinese OEMs, like Xiaomi, coming up
5 and having their own apps stores. And all of a sudden, Google
6 says, "Well, how about some -- how about a larger share of
7 Google Play revenue?"

8 This is the problem. It's not that they're giving the
9 OEMs money. It's that they're either giving the OEMs money
10 specifically not to foster competition, or they're giving them
11 money in the form of the revenue stream that the OEMs should be
12 competing with.

13 THE COURT: Okay. Seems like a reasonable point,
14 Dr. Gentzkow.

15 DR. GENTZKOW: Yeah. Well, I think --

16 THE COURT: That would address your issue. As
17 Dr. Bernheim is articulating it, Google would be perfectly free
18 to bargain for home screen territory or whatever they want to
19 do as long as it doesn't come from Google Play store revenue.

20 DR. GENTZKOW: Yeah. I think if we've narrowed the
21 scope of it in that way, so that any other revenue sharing is
22 acceptable, and any other conduct outside of that, which is not
23 revenue sharing but other forms of incentives that are part of
24 competition, are acceptable, I think we're closer to agreement.

25 I think Google Play Store revenue --

1 THE COURT: Now you're talking like a lawyer.

2 Do you have an agreement or not as economists?

3 (Laughter.)

4 DR. GENTZKOW: Yeah. I think the disagreement is just
5 there are conditions -- there are cases in which sharing
6 revenue from the Google Play Store is also consistent with
7 efficiency because the -- from an economic point of view,
8 revenue sharing, in general, gives incentives to the
9 counterparty -- in this case, the OEM -- to make investments,
10 to do promotions, to work hard, to create more value out of
11 that relationship.

12 Google Play revenue is one of the main ways that an
13 Android device produces revenue overall. There's search
14 advertising revenue. There's revenue from the Google Play
15 store.

16 From an economic point of view, limiting that has a
17 potential efficiency consequence because if there are
18 investments that an OEM makes that lead a user to download more
19 apps, to spend more time on their phone, to make more purchases
20 in apps, those are going -- the OEM is going to have less
21 incentive to do those things under a revenue-sharing contract
22 if it doesn't include Google Play revenue.

23 So I think there are efficiency reasons why that kind of
24 revenue sharing makes sense as well.

25 THE COURT: Okay. Let me ask you, leaving revenue

1 sharing aside, the other point from Dr. Bernheim was just
2 making sure that no agreement is conditioned on not dealing
3 with rivals, basically.

4 What's wrong with that? I mean, that's actually -- it's
5 an independence clause; let's call it that. Each contract will
6 have to have an independence clause saying you're perfectly
7 free to deal with anybody else on any terms you want.

8 DR. GENTZKOW: Yeah. I think that, again, if -- that
9 becomes very close to the terms that are already in the state
10 settlement which says you can't -- Google cannot make any
11 agreements with an OEM, for example, that explicitly reference
12 rivals in the context of exclusivity. So say --

13 THE COURT: All right. So, in other words, you agree
14 that that's an okay provision.

15 DR. GENTZKOW: I think that's an okay provision in the
16 context of exclusivity.

17 THE COURT: All right. Okay.

18 That seems to be Category 1 for proscribing prior conduct.

19 Now, looking more broadly, how do you address those other
20 factors that I've read from the cases about, which is, making
21 sure that Google does not continue to reap fruit from its
22 statutory violations and give some assurance to the public this
23 isn't going to happen again, in creative ways?

24 That -- admittedly, I'm going to have a hard time
25 predicting, but there may be some formulations that will at

1 least cabin the creativity in some constructive way.

2 Yes. Yeah.

3 DR. BERNHEIM: So I think my starting point is that if
4 you eliminated all of the conduct that we observed in the past,
5 as well as similar conduct, if you just proscribe that and
6 nothing else, that would not be sufficient because had it not
7 been for the conduct, we would have seen competition emerging.
8 We would be in a different place today, in 2024, than we would
9 have been -- than we actually are in 2024 as a result of the
10 past conduct.

11 And merely removing the conduct doesn't mean that
12 competition bursts out all of a sudden. It takes time to
13 evolve for a number of reasons -- one of which I'll get into in
14 a second.

15 So, you know, if all you did was prohibit these categories
16 of conduct, you're not going to get to where we would have been
17 in 2024. And you're not going to get to where we would have
18 been in 2026, when 2026 arrives. You know, you're going to be
19 in a lower trajectory in terms of competition.

20 Part of the reason for that is -- a large part of the
21 reason for that is that Google has -- Google Play has inherent
22 advantages because of the phenomena that we discussed at trial
23 called network externalities, the chicken and the egg problem.

24 As an app store I need users to get developers. I need
25 developers to get users. If I'm the dominant app store and I

1 have both, both are kind of going to stay there. If I don't
2 have either, it's hard to get the ball rolling. There are
3 strategies that I talked about at trial, like getting some
4 exclusive conduct -- content that will help get the ball
5 rolling.

6 But it's slow. It takes time. It's difficult. And it's
7 not just a matter of not having resources, not having money
8 available; it's a matter of laboring at a competitive
9 disadvantage relative to the party that benefits from all of
10 these network externalities.

11 The important point about that is that those advantages
12 exist in significant part because of past conduct. Past
13 conduct is what creates the dominance that we observe today,
14 that thereby creates the network externalities that make it
15 hard for competitors to break in to compete today.

16 So in my view, one of most important things that we need
17 to do is to find a way to mitigate the network externalities,
18 and we've offered, I think, a simple and creative proposal for
19 doing that. And part of the beauty of this proposal is that it
20 is built on something that Google has already done, which is
21 its Alleyoop arrangement with, I think it was, Facebook and one
22 other party.

23 And that's basically saying, you can have another
24 distributor of apps, say another app store that uses -- that
25 serves -- that may have its own products but also serves as a

1 storefront for Google Play. So if they've not signed up a
2 developer, they can still piggyback on the Google Play catalog
3 and list those apps on their own app store.

4 THE COURT: If I can just jump in --

5 DR. BERNHEIM: Yes.

6 THE COURT: This gave me a little bit of pause, and
7 I'll just -- I'll tell you why. And I'm speaking, of course,
8 as a federal judge, not as an economist, but the app store's
9 dominance, as the jury found, was directly correlated and
10 caused by some illegal antitrust conduct.

11 However, it certainly is a possibility and, in my mind, a
12 probability that there was perfectly legitimate conduct that
13 also led to the app store being the biggest player in town.

14 I'm a little reluctant to say -- if I'm understanding you
15 correctly, and please correct me if I'm not.

16 I'm a little reluctant to say anybody tomorrow can say,
17 "I'm going to open an Android App Store and, Google, you stock
18 my catalog with everything you are offering today for free, and
19 you will never realize a penny of profit from any sales that --
20 or any billing that goes through my app store."

21 I just -- how do you -- that seems a bit overbroad.

22 DR. BERNHEIM: Wait, wait, wait. I'm --

23 THE COURT: How is Google going to --

24 DR. BERNHEIM: If I've understood you, the last thing
25 you said sounds like it's not the remedy that we proposed. So

1 let me just restate --

2 THE COURT: Oh. All right. But access to -- letting
3 a third party, tomorrow, have complete access to all the apps
4 currently available in the Google Play Store is part of your
5 proposal.

6 DR. BERNHEIM: It is. But all of the revenues go to
7 Google Play.

8 THE COURT: Oh, I missed that part. All right. Tell
9 me about that.

10 DR. BERNHEIM: This is very important.

11 THE COURT: Yes.

12 DR. BERNHEIM: That's what I meant by it only being a
13 storefront.

14 So they get to basically port the Google Play catalog onto
15 their store, list all those apps. If they've not established a
16 direct relationship with a developer, then this is all just
17 piggybacked on Google Play. The sale is at Google Play's terms
18 and conditions. It is just passed through to Google Play.
19 Google Play keeps all of the revenues. Nothing has happened
20 other than you've mitigated the network externality.

21 THE COURT: How is that new Play Store entrant going
22 to make money?

23 DR. BERNHEIM: Ah. So the new Play Store entrant
24 makes money by signing up developers. Once it signs up
25 developers, it starts listing things on its own site that are

1 things that are -- it's stocking in its store.

2 And if the user gets on that side and says, "I'm going to
3 download this app," and it's an app where the rival store
4 actually has the relationship with the developer -- okay. So
5 they don't need to piggyback on Google Play for that one --
6 that's their sale. They get to keep that. They get to keep
7 the revenues from that.

8 So in the meantime, the only disadvantage they are at as a
9 competitor is -- well, the disadvantage that they would have
10 been at as a competitor from having a smaller catalog, which is
11 the source of the network externality issues, that's removed.
12 And they don't get any benefit from that other than removing,
13 you know, that disadvantage, having a smaller catalog. Other
14 than that --

15 THE COURT: And then you're -- and the rival who gets
16 access to this catalog could then approach each developer in
17 the Google Play Store catalog and offer its own deal and say,
18 for example, "I'm opening my new storefront. I'm going to have
19 access. All your money and deal terms with Google are going to
20 stay in place unless you sign with me, in which case I'll give
21 you a better fee deal."

22 DR. BERNHEIM: Exactly. And that's how competition is
23 supposed to work.

24 THE COURT: This specifically addresses the network
25 effect problem that we heard about at trial.

1 DR. BERNHEIM: That's what it's designed to do. It
2 mitigates the network --

3 THE COURT: And is there a cap on duration? Is it
4 six years?

5 DR. BERNHEIM: Yes. It's a six-year cap.

6 THE COURT: Doesn't that seem a bit long?

7 DR. BERNHEIM: Well, the length of this is a judgment
8 call, and it's, honestly, not an exact science. Let me tell
9 you my reasoning for six years. But obviously, ultimately,
10 it's a judgment.

11 THE COURT: Well, this -- I want to hear from an
12 economist why six years is the number.

13 DR. BERNHEIM: Exactly.

14 So I think about it this way: There are sort of
15 two stages to entering. The first is you have to, you know,
16 make your app store. And that's not a simple process. You
17 heard testimony from Google witnesses about that at trial.
18 Google -- they testified that Google had to make large
19 investments in its app store, that its app store has all sorts
20 of things that they invested in creating. Things like app
21 discovery. This is not a quick process.

22 So you need to give potential entrants some time to
23 develop and launch their app stores. And what I'm thinking, in
24 my mind, that's okay. They need a couple of years to do that,
25 two or three years.

1 Now, after they do that, now you have competing app stores
2 out there that are potentially viable competitors. They need
3 enough time to establish a base of users and a base of
4 developers that will be robust, and therefore, competitively
5 sustaining; it's viable once this provision expires.

6 And so, in my mind, the appropriate length of time was an
7 additional three years. The reason three years is that that's
8 is one phone purchase cycle.

9 So if they're trying to compete through -- through
10 preloading, then one phone -- one phone purchase cycle
11 basically gives the competitor a shot at the entire market once
12 they finish developing and launching their app store.

13 So that's the thinking behind the period. But I readily
14 acknowledge that this is not an exact science. What we're
15 trying to do is a bit of rough correction for the advantages
16 that Google has but shouldn't have because they're derived from
17 its past conduct.

18 THE COURT: All right. I'm just going to call on
19 Dr. Gentzkow. I don't know how you're dividing the labor.

20 DR. GENTZKOW: I'll take this one too.

21 THE COURT: What's the response to that? Why isn't --
22 how is that unduly burdensome on competition?

23 DR. GENTZKOW: Yeah. So let me make several points.
24 The first is to agree with something that you said which is
25 that the network effects that we're talking about here and

1 those advantages that Google has represent something that
2 existed before any of the conduct that was at issue in the
3 case. And my understanding, what the jury considered at trial,
4 was conduct starting in 2016.

5 If we roll back the clock to 2016, at that point, the
6 Google Play Store already had a very large catalog of apps. It
7 already had a large number of users. Those network effects
8 were very much in place. In fact, as early as 2011, the Google
9 Play Store had a huge catalog -- much larger than its rivals
10 already at that point in time, when I think even plaintiffs'
11 experts have said Google didn't have any market power, monopoly
12 power, at that point in time.

13 So Google was a new entrant that competed successfully.
14 That's where these network effects come from. So the
15 suggestion that we should try to create a level playing field
16 in the sense of eliminating those, I think is not at all --

17 THE COURT: But I think my concern is you're
18 overweighting that the jury has found that illegal
19 monopolization conduct, at a minimum, bolstered and protected,
20 built a moat around, so to speak, whatever natural advantages
21 Google had established at that point.

22 I need to address that. So I'm definitely not going to
23 say just because there were some first-mover advantages and so
24 on that are totally legitimate, there won't be a consequence.
25 But maybe the way to address that is just have a much shorter,

1 you know, like a two-year horizon, rather than a six-year
2 horizon.

3 DR. GENTZKOW: I understand and I'm not saying there
4 shouldn't be any consequence. I'm just saying that should
5 certainly not be to eliminate the network effects or try to
6 remove that advantage entirely because it's one that Google won
7 through competition.

8 Second point that I think is really important is that --
9 we were talking about the service fee revenue and how that's
10 going to flow, I think it's crucial that the overwhelming
11 majority of apps on the Play Store don't generate any service
12 fee revenue, or very, very little.

13 A lot of what provides value to users is those apps --
14 which many of them are free, many of them provide little
15 revenue -- that there's going to be very little incentive to
16 compete for, and Google is going to be asked to share all of
17 that intellectual property with its rivals.

18 THE COURT: What intellectual -- Google is hosting a
19 third-party app. What's the intellectual property that's being
20 shared?

21 DR. GENTZKOW: There's an entire infrastructure that
22 they have built to host those apps, to provide for downloads of
23 those apps.

24 THE COURT: That's all going to be happening over the
25 a rival -- through the a rival store. It's not going to be

1 using Google's service, is it?

2 DR. GENTZKOW: As I understand the proposal, and
3 Dr. Bernheim can correct me if I've got it wrong, what is
4 envisioned here is, if I'm a rival app store and a user -- so
5 first of all, a user can come to the store and now see all
6 3 million -- or more than 3 million apps that are in Google
7 Play.

8 If a user wishes to download one of those apps, Google is
9 obligated to provide the service of downloading the app for the
10 user, putting that up on their phone, fulfilling that download.
11 So there's intellectual property associated with that.

12 THE COURT: Yeah, but you're also saying there's cost
13 associated with that.

14 DR. GENTZKOW: And there's costs to Google associated
15 with that.

16 THE COURT: Let's pause a minute.

17 So, Dr. Bernheim, let's say -- let's make this a little
18 more concrete. Let's say there's an app for growing cucumbers
19 that generates zero revenue because five people a year download
20 it. Google does have some costs, sunk or otherwise, in getting
21 that out to the five cucumber people.

22 How do you account for that?

23 DR. BERNHEIM: In the following way:

24 Professor Gentzkow is forgetting about the other feature
25 of this remedy that creates very strong incentives, which is

1 that this provision expires -- and we can, you know, return to
2 the issue of how long that period should be, but it expires
3 after a certain amount of time. Now, think about the
4 incentives that creates for the competing app store with
5 respect to all of the smaller apps, all the apps that don't
6 generate revenue.

7 Professor Gentzkow is essentially arguing that what a
8 competing store might do is focus on, say, the top 250 apps.
9 Go to those developers -- that's where most of the revenues
10 are, you try and create relationships with those developers,
11 but you don't bother with any of the others.

12 Okay. That means, at the end of six years, or however
13 long you want to make it, your app store has 250 apps and you
14 lose access to everything else. So now you're back in the
15 situation where Google has a catalog with 3 million-plus apps
16 and you, as a competitor, only have this small subset of apps.
17 There's no way you're going to survive at that point.

18 So in order to be viable when this provision expires, a
19 competing app store must be broadly developing relationships
20 with developers and bringing developers online so that they
21 have a robust catalog when the provision expires.

22 THE COURT: So, in other words -- just to jump in.

23 In other words, they would be needing to put their own
24 work into making sure the cucumber app was available
25 independently on their store. Particularly, one way to

1 mitigate that, in my view -- or ameliorate it, would be a
2 shorter window, two or three years, of allowing the access.
3 That would put a real fire under the a rival to -- if network
4 effects is really the issue, they're going to have to work hard
5 to make sure that those 3 million apps are as freely available,
6 whether they generate money or not, on their own site.

7 DR. BERNHEIM: I think you're totally right to focus
8 on the length of time as the right policy lever here. And my
9 only hesitation there is whether two or three years are enough,
10 because we've heard a lot about how hard it is to create a
11 really top-notch app store.

12 THE COURT: No, I understand. And there is a
13 balance -- and I want to be clear that Google, as an illegal
14 monopolist, will have to pay some penalties. So I'm not -- I'm
15 not at all averse to having them bear some costs. But there is
16 a point where that crosses a line to being unreasonable.
17 Remember that the standard here is what is reasonable.

18 DR. BERNHEIM: Yes. But --

19 THE COURT: And six years of that strikes me as an
20 awfully long time.

21 DR. BERNHEIM: Also bear in mind, though, that Google
22 is distributing apps for -- as Professor Gentzkow just said,
23 for the vast majority of its catalog currently without deriving
24 directly any revenue from that.

25 So I think that what that's telling us is that the cost of

1 this distribution is not terribly high, particularly compared
2 with the profits that Google has earned by virtue of its
3 monopolization. We had testimony about that at trial.

4 THE COURT: Well, it certainly goes to the issue of
5 not retaining the fruits of illegal conduct. So if they had to
6 pay back a little bit, that's perfectly within the realm of
7 possibility.

8 DR. BERNHEIM: That's the argument, yes.

9 THE COURT: Okay. Dr. Gentzkow, what -- seems like a
10 good response.

11 DR. GENTZKOW: Yes. I think that -- two points that
12 are crucial.

13 First, Dr. Bernheim and Epic's essential argument at trial
14 was that app stores can successfully enter the market without
15 having all of those other -- that whole catalog of free apps
16 because they can do it by having exclusives on a small number
17 of top games, top apps; and that is what we actually see
18 happening in the market. There are new entrants already.

19 Microsoft just announced it's going to create an Android app
20 store relatively recently; I think it's opening this summer.

21 There are other app stores around the world which being
22 are created. In India, the largest games company just said
23 they're introducing --

24 THE COURT: Can I just jump in?

25 I will ask you to help me. I don't recall testimony at

1 trial to the effect that Google's network externalities can be
2 overcome by just having a select few number of high-end
3 developers on your store.

4 DR. GENTZKOW: We could go back to look at the
5 detailed record, but central -- this was in the context, for
6 example, of the Project Hug agreements, which one of the main
7 reasons that -- I think, in Dr. Bernheim's testimony, as I
8 recall, that he objected to those because it prevented those
9 developers from opening app stores with exclusive content or
10 distinctive content, differentiating themselves from the Play
11 Store. And he made the specific case that that is a viable
12 strategy. But for the challenged conduct, those app stores
13 would have been able to enter and succeed.

14 THE COURT: Okay.

15 DR. GENTZKOW: The second thing that I think is really
16 important to point out here is that what we're talking about,
17 this catalog sharing, has the potential to really harm
18 developers and to harm users, have a lot of unintended
19 consequences that are really hard to foresee.

20 This is a pretty radical reengineering of the market. I
21 think Dr. Bernheim described it in his statement as decoupling
22 the two sides of the market.

23 So we're changing things dramatically here in ways that
24 could potentially cause more harm than good. And I just want
25 to flag some potential harms from the developers' point of

1 view.

2 Think about the developer in this. I'm a developer. I
3 come along. I put my app in the Play Store. That app is now
4 going to appear in any other Android app store, of which there
5 are dozens and dozens, some of them more reputable than others.
6 I have no control over that, as I understand the proposal.

7 And my app could appear next to objectionable content.
8 There are app stores that host pornography and other content
9 that I might not want my app next to. So my apps are being
10 distributed potentially without my consent, or at least in ways
11 that I might not anticipate.

12 And the other form of harm is this is going to shut down
13 or at least substantially diminish --

14 THE COURT: Let's pause on that.

15 So the concern is the developer may be in company on an
16 app store the developer dislikes and will have not necessarily
17 any prior knowledge of that and may, I assume, have no
18 possibility to fix that. Even if they discover they're next to
19 something objectionable that they don't like, they wouldn't
20 necessarily be able to get off that app store.

21 DR. GENTZKOW: And I think that's --

22 THE COURT: That's a harm to developers. Other than
23 hurt feelings, how is that a harm to developers?

24 DR. GENTZKOW: Because it could undermine their brand.
25 It could undermine the reputation that they have with users if

1 users see that.

2 Let me just say that I think the content that it's next to
3 is just one example.

4 THE COURT: I'm trying to put a -- something concrete
5 on what the harm is. I mean, I understand a developer may -- I
6 mean, to take an extreme example, there might be a religiously
7 charged app and somebody does not want it to be next to
8 something they consider to be morally reprehensible. They
9 certainly would have moral injury, so to speak, from being
10 unhappy that they're in an app store with products that they
11 find incompatible with their viewpoints.

12 But what is the harm? There's no economic harm, is there?

13 DR. GENTZKOW: I think the economic harm would come
14 from a user seeing that app in that context and having their
15 evaluation of this religious app that they were thinking of
16 downloading, say. They see it in a context next to some
17 objectionable content, and they think, "This is a developer
18 that puts their app in this app store. That's maybe not the
19 app that I want to download."

20 And so demand, from an economic point of view, is reduced
21 by seeing it. There's also -- just to flag other versions of
22 this, other reasons why a developer might want to limit the set
23 of app stores or apps they're distributed through. These are
24 all over the world, so there may be legal implications of
25 having my app distributed in other countries that have

1 different legal regimes. They might be in different currencies
2 and different languages. So that's potentially problematic.

3 And --

4 THE COURT: I'm having -- so the premise of
5 Dr. Bernheim's access point is, this is all going to be
6 Google's business as usual. It's just coming from a different
7 portal. Until that developer strikes an individual deal with
8 the -- and I'm sorry.

9 Until that app store owner strikes an individual deal with
10 a developer, it's all Google. It's 100 percent Google.
11 Nothing is different except you're walking through, you know, a
12 different door to get into Google. So these are all -- Google
13 has already solved all these problems.

14 You know, like, an app that might be illegal in Iran, for
15 example, is probably not in the Play Store already or -- I
16 mean -- so I'm just not getting it. You're going into the
17 Google Store just through a side door, but it's all Google
18 otherwise, until this developer strikes a deal. And at that
19 point, the developer is going to know exactly what app store
20 they're on because they're negotiating a deal directly with
21 that app store, so there won't be any surprises.

22 So I'm having trouble understanding how this is actually a
23 concrete issue.

24 DR. GENTZKOW: If I understand the way it's
25 envisioned, just that that app, although it's being -- the

1 downloads are being fulfilled by Google and it's being shared
2 out from Google, it's appearing in that other app store And
3 those app stores are going to be distributed in, potentially,
4 places where the Google Play Store is not, and they're going to
5 host content that might appear alongside it.

6 So I think that's --

7 THE COURT: Wouldn't Google in fulfilling it already
8 have executed all those restrictions? They would know they
9 can't fulfill an app in a certain country.

10 DR. GENTZKOW: Well, I think that that -- Google might
11 have apps in the Play Store which it offers in certain
12 countries but not in other countries, potentially.

13 But I think administering this, there needs to be some
14 procedure here then to determine from Google's point of view,
15 are they going to get consent from developers to share their,
16 the developers', intellectual property out through all of these
17 app stores?

18 Are developers going to have an opportunity to opt out of
19 doing that?

20 Is there going to be a system, if a developer does see
21 their app in a context that they don't like, for them to
22 redress that, to ask for it to be removed?

23 So I think -- I think all of those things are going to
24 make it potentially harmful to developers.

25 And the other point --

1 THE COURT: Let's just pause in that for a moment.

2 Dr. Bernheim, do you have any response to that?

3 DR. BERNHEIM: Sure. So let me begin with this last
4 point about the supposed harms from catalog sharing.

5 The thing about distributing all over the world, I just
6 think is a nonissue for exactly the reason you were raising,
7 Your Honor.

8 Somebody tries to buy the app through another app store
9 and they're going to get a message back from, you know,
10 indirectly from Google that says: "Not available in your
11 area."

12 And I don't -- I don't see how that -- how that ends up
13 being a problem.

14 The issue about no control by developers, you may end up
15 with your app next to some unsavory content. I haven't
16 actually seen any evidence that developers are concerned about
17 this. This seems a bit hypothetical to me, so I'm not sure
18 that there's any real problem there; but if you became
19 convinced that there was a problem there, I think that there
20 are alternatives available in terms of tweaking the remedy.

21 You know, you could incorporate a developer opt-out
22 option. Now, if you did that, there are a couple of things
23 that would be very important. One is that the opt-out should
24 be store specific, rather than broadly opting out of everything
25 because I -- I'm sorry.

1 The hypothesis here is that there are certain stores out
2 there that may be doing unsavory things, so you don't want the
3 developers' only option to be: To avoid that one store, I have
4 to opt out of these 10 others.

5 THE COURT: Well, I was actually -- I'll tip my hat.

6 I was actually thinking more of an opt-in. What about
7 that? Every time a store opens -- I'm just talking off the top
8 of my head on this part, but every time a store opens, Google
9 sends a notice saying: "Would you like to opt in to be
10 available on this other platform?"

11 DR. BERNHEIM: Right. There's a literature on opt-in
12 and opt-out in behavioral economics, and what it shows is that
13 there tend to be very strong default effects, the default
14 effect being whatever you establish as the default, you get a
15 lot of people just not changing the default.

16 So if you establish the default to be opt-out so that
17 people have to opt in, you're going to have a much smaller
18 fraction of developers who end up opting in.

19 If, on the other hand -- and some of that is
20 unintentional; right? It's: They get the message. They
21 ignore the message.

22 Doing it the other way around puts more of the onus on
23 this fairly uncommon developer who's bothered by this sort of
24 thing. It's like the default here is that you're opted in. If
25 that bothers you, you do have an option to remove.

1 Let me just add --

2 THE COURT: Actually, just to jump in, so as an
3 economic principle --

4 DR. BERNHEIM: Yeah.

5 THE COURT: -- opting in is going to be much less
6 effective in dealing with network effects than opting out.

7 DR. BERNHEIM: That's correct.

8 THE COURT: Okay. All right.

9 DR. BERNHEIM: Okay. What I would add in terms of
10 what else would be needed if you go for the opt-out option is
11 the provisions that we talked about a little while ago, about
12 Google not being allowed to write contracts that are
13 conditional on activities as a rival or interactions with a
14 rival. They would have to apply to opt out, too. You don't
15 want Google incentivizing opt-out, or that's going to defeat
16 the whole purpose.

17 And we probably would also want that provision that I
18 described earlier that says -- you know, in the contract with
19 the developer, it says: Nothing in here -- none of the terms
20 in here are conditional on your opt-out decisions.

21 THE COURT: This is probably beyond your expertise,
22 but how would the opt-out work?

23 DR. BERNHEIM: So this is getting into a technical
24 question. I can tell you how I envision it, and then other
25 parties who know more about the technical details are going to

1 have to say what's feasible and what isn't feasible.

2 But you could imagine that a developer, when first listing
3 a -- a -- an app on Google Play simply gets a screen on which
4 there are listed a bunch of stores, and you know, they can
5 check the ones that they don't want to be listed on.

6 THE COURT: Well, we've gotten 3 million installed.
7 Let's say next week somebody opens -- or week after the
8 injunction is out, if I did this --

9 DR. BERNHEIM: Yeah.

10 THE COURT: -- 10 stores open up.

11 DR. BERNHEIM: Right.

12 THE COURT: Now, is that developer going to get
13 10 opt-out requests for each of those stores?

14 DR. BERNHEIM: For a new store, we would have to have
15 some process of reaching out to the developers. It seems like
16 that could be a fairly easily automated process.

17 THE COURT: Through Google?

18 DR. BERNHEIM: Through Google. I'm not sure it would
19 need to happen, you know, literally the moment that a store
20 pops up. It might be enough to do it once a month, for
21 example. Developers get a message that says: During this past
22 month we have the following new stores. Please indicate
23 whether you want to opt out of any of those.

24 THE COURT: This is a little bit more detail than we
25 need, but this would be a one-time only opt-out? What if

1 six months later you decide the store is going in a direction
2 you don't like.

3 DR. BERNHEIM: No. They should be able to get back
4 into the system and opt out.

5 THE COURT: Okay. So it's -- it's one ask, and then
6 you can ask yourself if --

7 DR. BERNHEIM: I think you probably should be able to,
8 yes.

9 THE COURT: All right. Dr. Gentzkow?

10 DR. GENTZKOW: Yeah. So I think the first thing I
11 would say just on the characterization of economics is I think
12 that same behavioral economics literature that Dr. Bernheim is
13 referencing shows that if the default is opt-in, there are
14 going to be a very large number of developers that are opted in
15 without realizing that, without paying attention to it, without
16 noticing this notification that might come through their
17 e-mail.

18 So I think the problem, from my point of view, with making
19 the default be for every developer on Play to be shared in
20 every Android app store is that those of them that would suffer
21 some harm from that, there are going to be a lot of them that
22 don't recognize that. I think the opt-in version of that --

23 THE COURT: But they could -- if it turns out later
24 that someone says, "Hey, this is a bad deal," they can tell
25 Google or tell the store, tell the rival store, "We don't want

1 to be here anymore."

2 DR. GENTZKOW: They could -- they could opt out later.

3 THE COURT: What's wrong with that? Look, I have to
4 do something to overcome the network effects. This seems
5 reasonably tailored to that. Leaves it up to the developer.

6 So if you're worried about harm, who better to decide the
7 harm than the -- or the risk of harm than the developer itself?

8 DR. GENTZKOW: Yeah. And I think that is satisfied by
9 the opt-in version of it that gives developers who would like
10 to participate in this the option to do that. I also think
11 that, even under that provision, there's harm to the developers
12 because there's going to be less competition in this market.

13 We're going to be reducing the amount of competition.
14 Right now, all of these app stores have incentives to compete
15 for service fee revenue from apps but also for the apps that
16 are going to be part of their catalog they can show to users.

17 THE COURT: Well, but that's why they'll have a
18 two-year horizon. So for two years -- two years you get to --
19 to build your base on a Google Play Store that is, at least in
20 part, the fruit of illegal conduct. After two years, if you
21 haven't locked in those developers, they're gone.

22 DR. GENTZKOW: And so just --

23 THE COURT: So you will lose as the rival store. You
24 will lose if you haven't locked in your own independent deals.

25 So doesn't that address that issue for competition?

1 DR. GENTZKOW: I don't think it fully addresses that
2 issue because for that -- for the duration of that period of
3 time, there are going to be less incentives to --

4 THE COURT: Well, of course. There's a remedial
5 period in the wake of the verdict of monopolization. That just
6 comes with the territory.

7 Okay. There's going to be a two-year period when we have
8 to make things right. It's like my recovering from the
9 shoulder surgery. I've got six months where I have to do
10 things that I don't want to do and can't do things that I do
11 want to do; but at the end of it, I'm going to be great. Okay?

12 So this is the two-year -- this is the equivalent.

13 DR. GENTZKOW: Yeah.

14 THE COURT: So for two years, maybe there'll be
15 technically reduced competition. But I just don't see that
16 because those developers -- or those app stores are under a gun
17 literally; that if, at the end of that two-year period, they
18 haven't locked in their deals, Epic is gone, all the top people
19 are gone. And that's got to be a huge spur to competition.

20 DR. GENTZKOW: Yeah. So I think it's -- I think I
21 just -- I just need to highlight the harm that could happen
22 during that period of -- during the term of that provision.

23 THE COURT: Dr. Bernheim?

24 DR. BERNHEIM: A couple of things. First, I just
25 wanted to address the length for one second because you have

1 mentioned two years.

2 THE COURT: Because -- I know I keep saying two. It's
3 not a scientific number, but --

4 DR. BERNHEIM: So on that, one other possibility to
5 consider is to say that there is some period of time which
6 could be a longer period of time, like six years, wherein if an
7 app store launches, it gets two years of catalog sharing after
8 that. Up to the total limit of six years.

9 What I'm concerned about is if you just say two years,
10 starting from 2024, you're going to get stores launching late
11 in that two-year period, and they're just not going to get much
12 of a benefit. Whereas, if it is once you launch you get the
13 two years, as long as that total amount of time doesn't exceed
14 six years, that would be a better way to ensure that rivals,
15 once they launch, are going to benefit from this provision.

16 That said --

17 THE COURT: That would seem, though, to actually maybe
18 be a bit of a restraint on competition. So, basically, you
19 have six years of restrained competition as opposed to
20 two years.

21 I understand what you're saying about if somebody decides
22 in month 14 or month 18 to launch, they may have only
23 six months of access, but that's their choice. I mean --

24 DR. BERNHEIM: Well, it's just not feasible for some
25 of them. So Amazon may be ready to launch right away. So

1 Amazon launches right away, 2024. 2026, they lose catalog
2 access. It doesn't go beyond the two years. So what you're
3 doing for Amazon lasts two years in providing the access and no
4 more. You could do it that way.

5 But if somebody, you know, a new entrant goes "Hey, the
6 rules of the game have totally changed. We're not ready to
7 launch an app store but this is a great market," you don't want
8 them taking close to two years. It's going to take time --

9 THE COURT: I understand. But I also don't think
10 someone should have the ability to wait for four years and then
11 say, "Now I want in." That just seems a little much.

12 DR. BERNHEIM: This is a matter of adjusting the
13 lengths of time so that they seem reasonable. So is it
14 four years? Is it three? Is it two and two?

15 I'm just suggesting that there's an additional --

16 THE COURT: Nuance. I see.

17 DR. BERNHEIM: -- avenue for you to work with -- this
18 is a judgment call. This part of it is really not an exact
19 science. So it's a judgment call, but you have two pieces to
20 work with here rather than one.

21 THE COURT: Okay.

22 DR. BERNHEIM: The other thing that I wanted to
23 address is this opt-in/opt-out thing where Professor Gentzkow
24 has made an argument that it should be opt-in rather than
25 opt-out.

1 And I think the thing to keep in mind is that the vast
2 majority of developers are very unlikely to want to opt out,
3 given their awareness of it.

4 Remember how this works. If they want, they don't have to
5 sign up with any other app store. Their relationship could
6 still be entirely with Google, Google's terms and conditions,
7 everything with Google; right? And the only additional thing
8 that happens is they may get some additional sales that happen
9 to originate in other stores.

10 That's the only change.

11 So I think the majority -- the vast majority of developers
12 are going to go "This is a great deal. We're getting free
13 exposure in additional locales. Why is that bad?"

14 So there may be an occasional developer who says: We
15 really care about this issue of being sullied by something else
16 on this particular store.

17 Any developer that feels that way is going to have the
18 motivation and the opportunity to opt out. The ones who care
19 about this can opt out.

20 I don't think that the fact that there may be a small
21 number of those should mean that we use this inertia effect to
22 contrive an outcome that is going to work in Google's favor.

23 THE COURT: Okay. Dr. Gentzkow, you're going to
24 describe potential harms to users, and then we'll take a short
25 break after that. Okay?

1 DR. GENTZKOW: Yeah. I think there are potential
2 harms to users, first of all, from diminished competition
3 because --

4 THE COURT: All right. For a two-year period or
5 four-year period, that is just going to happen, but --

6 DR. GENTZKOW: For that duration, there would also be
7 harm to users.

8 THE COURT: Why is that a harm to a user, if the
9 stores multiply? That makes it a lot easier to find the app
10 you want.

11 DR. GENTZKOW: Just in a sense that in a two-sided
12 market in economics, one of the reasons why you're competing to
13 attract users is because you want to attract developers -- this
14 is the chicken-and-egg kind of issue that Dr. Bernheim referred
15 to -- and if I no longer need to attract developers, I'm going
16 to compete less for users.

17 There's another part of this proposal which we haven't
18 talked about which Epic has referred to in the proposed
19 injunction as "library porting." I don't know if that is still
20 part of the proposal; but if it is, that also, I think,
21 involves substantial harm to users that we'd want to discuss.

22 THE COURT: Okay. Dr. Bernheim?

23 DR. BERNHEIM: Your Honor, honestly, I don't
24 understand the diminished competition point.

25 THE COURT: I'm struggling myself, but I'm not an

1 economist. So help me. Help me.

2 DR. BERNHEIM: Right now we don't have meaningful
3 competition. This remedy is creating a pathway to competition.
4 And on that pathway, all the parties have strong incentives to
5 compete. The rival app stores have incentives to sign up
6 developers so that they can get revenue streams and so that
7 they're not dead in the water when this provision expires.

8 Google has incentives to continue to sign up developers so
9 that they're not at a disadvantage.

10 THE COURT: And maybe change their fee structure too.

11 DR. BERNHEIM: Right.

12 So all of a sudden, you have competition bursting out. I
13 just don't understand the point about reduced competition.

14 Library porting is a longer issue, and Professor Gentzkow
15 hasn't explained the objections yet, so --

16 THE COURT: Let's do this. Let's take a 10-minute --
17 we'll come back at 12:40, and we'll pick it up at the library
18 porting. Thank you.

19 THE CLERK: All rise. Court is in recess.

20 (Recess taken at 12:26 p.m.)

21 (Proceedings resumed at 12:45 p.m.)

22 THE CLERK: Remain seated and come to order.

23 We're back on the record in Civil 25-671, Epic Games, Inc.
24 v. Google, LLC, and Multi-District Litigation 21-2981, In Re:
25 Google Play Store Antitrust Litigation.

THE COURT: Okay. We stopped with the library issue.

Dr. Bernheim?

DR. BERNHEIM: I'm happy to dive into library porting.

THE COURT: Yes, please.

DR. BERNHEIM: I think Professor Gentzkow hadn't explained the objections to it yet.

THE COURT: Okay. Let's set the table then.

Dr. Gentzkow?

DR. GENTZKOW: So the library porting remedy, I think it's important to describe again what it amounts to, to describe what it amounts to, which is that any app store on my phone can present me with a screen. And if I click on it, that app store takes over all of the other apps on my phone that were downloaded from Google Play that are in that app store. It now controls their updates and it now gets all of their service fee revenue.

So let me highlight three problems with that.

The first, I think, just to keep in focus, along with the catalog access remedy, this is part of a really radical restructuring of the market, what Dr. Bernheim has described, turning a two-sided market into a one-sided market is a pretty dramatic restructuring.

Second, I think, something we haven't touched on that is really important to keep in focus is that the technology for none of these things exists right now. Dr. Bernheim alluded to

1 Alleyoop -- we can talk more about that, but it's incorrect in
2 my understanding that there is any technology existing that
3 would not require development of a substantial new product to
4 do this.

5 And third, as I alluded to before the break, I think this
6 has the potential to really harm users. Think about like what
7 it's setting up is a situation where any app store that gets a
8 user to click on one button can take over the service fee
9 revenue from all of their apps. That's an enormous economic
10 incentive for app stores to get users to click on a button and,
11 I think, looking out at the economy broadly, situations where
12 firms have huge incentives to get users to click on something
13 tend not to work out very well.

14 There's a huge possibility, coming back to behavioral
15 economics, as Dr. Bernheim was talking about. We know
16 consumers are not super attentive to those things, and that is
17 going to give the app stores a huge incentive to bombard them
18 with messages trying to get them to do that, to put up a
19 deceptive message that tries to get them to click on it, maybe
20 inadvertently.

21 THE COURT: I'm having trouble understanding that.

22 What I -- what you seem to be saying is consumers benefit
23 from a monopoly. I don't agree with that. Just because
24 there's one source, so you won't be bombarded with competing
25 messages or ads you don't want, that's not -- I don't see that

1 as consumer harm.

2 I mean, yes, okay, maybe -- maybe because Google has a
3 chokehold on the market, which is illegally acquired through
4 monopolistic conduct, life is less cluttered for users. But to
5 me, it seems perfectly fine to say competition will have a lot
6 more outreach from competing stores.

7 Why is that a harm?

8 DR. GENTZKOW: I think it's a really important
9 question because I think there's a huge distinction between
10 economic competition and what this would entail.

11 Remember that all of these apps on my phone were
12 discovered and downloaded through another app store that
13 provided all the services to do that.

14 What these other app stores are competing for is not to
15 deliver more value to consumers. There's not a proposition
16 here of "You will click on this if -- because our app store is
17 better, because we're offering lower prices. There's -- all we
18 need to do is get you to click on one button."

19 And so while there is some competitive incentive there, I
20 think there's going to be a tremendous likelihood that the
21 competition is not on the margin of giving value, but of
22 tricking consumers, using dark patterns, using deceptive
23 marketing to get them to click on something.

24 THE COURT: This all seems completely speculative to
25 me.

1 Where is all this coming from?

2 It seems to me that you're just presuming, without any
3 evidence in the record, that this is going to devolve into a
4 sort of dystopian nightmare of competing app stores.

5 Why isn't it equally probable, if you're just speculating,
6 that the opposite will happen, this would be a golden age of
7 consumer choice?

8 DR. GENTZKOW: I think it's important to say there is,
9 as you said, in the record, no evidence either way on what
10 would happen with this because it's completely outside of
11 anything that was considered at trial. So there's a risk -- at
12 a minimum, I would say there is a risk that it could create
13 substantial harms of the kind we're talking about.

14 THE COURT: I just don't see why you say that. That's
15 what I'm saying. I don't -- yes. Okay. I mean, that is just
16 like saying, there's an equally reasonable probability that it
17 will be the best thing that's ever happened. So it's a
18 value-neutral choice.

19 DR. GENTZKOW: Yeah, I think it's -- I think that it
20 is creating something completely new that has never existed
21 before that has the potential to create real harm for users.

22 Think about what happens. I downloaded the Aptoide App
23 Store. I click on this button. I'm a user who creates a lot
24 of revenue. I play a lot of games. I have a lot of apps on my
25 phone. The Aptoide App Store takes over all of those apps and

1 now -- first of all, as part of this, as I understand it, that
2 app store has access to a list of all of the apps on my phone.
3 There are privacy risks associated with that. I could have a
4 cancer-related app. I could have an app that reveals my --

5 THE COURT: Well, but Google is already doing that.

6 DR. GENTZKOW: Google is already doing?

7 THE COURT: Google already knows what all the other
8 apps are on your phone. So what difference does it make if
9 another store does?

10 DR. GENTZKOW: Because consumers consent to and
11 understand that as part of relationship with Google. They're
12 not anticipating that all of those apps are --

13 THE COURT: Consent? Have you read user -- terms of
14 use that most of these tech companies have?

15 DR. GENTZKOW: The --

16 THE COURT: The consent to give away everything in
17 your portfolio, every private information. I see these
18 constantly. Every judge in this district does.

19 DR. GENTZKOW: I understand.

20 THE COURT: Okay?

21 I mean, if you want to talk about consent, every time you
22 sign up for one of these tech services, you have given away
23 basically everything you consider to be private. So I don't
24 understand -- so what difference does it make if another app
25 store has equal footing to that same information? How is that

1 harmful to consumers?

2 DR. GENTZKOW: The expectation, I think, that a
3 consumer has of their relationship with Google, if you have an
4 Android phone -- I think if we surveyed -- I do not have
5 quantitative evidence on this --

6 THE COURT: I find this to be unproductively
7 speculative.

8 What is the economic point you're trying to -- I think,
9 you know, you're not in a situation to guess what consumers may
10 or may not think.

11 What is the economic -- what is the economic harm to the
12 users? None of this so far is an economic harm, which is your
13 area. What is the economic harm to users?

14 DR. GENTZKOW: I think the economic harm comes from
15 the consumer's potential to have, as part of this transaction,
16 their privacy compromised, their security compromised,
17 potentially, through --

18 THE COURT: But you don't know any of that. You have
19 no data for that. And you have no data to show that that would
20 be any different from what Google is currently doing.

21 DR. GENTZKOW: Right. I recognize that --

22 THE COURT: Right? You don't. So --

23 DR. GENTZKOW: But I would also just note that, part
24 of the reason why there's no data for that in the record is
25 because this whole proposal of restructuring the market in this

1 way is one that we haven't had evidence about at all. And so,
2 at the minimum, it has the potential to do a lot more harm than
3 good. Those risks are --

4 THE COURT: I just don't see that. I mean, you keep
5 saying that, but that's just your saying it. I mean, you have
6 no evidence for that. And it's not a matter of not having a
7 record.

8 You should know, or you might have known what Google does.
9 You haven't said this would be anything different from what
10 Google does. That's the only touchpoint that really matters.

11 Is this anything different from what Google already does?
12 And I don't think you're in a position to say one way or the
13 other.

14 Are you? Maybe you are.

15 DR. GENTZKOW: I think it is completely different than
16 what Google does because there is a no analogous provision or
17 no analogous technology in the Google Play Store to take over
18 apps that were downloaded through other app stores on the --

19 THE COURT: That doesn't speak to the privacy and
20 security concerns that you believe may be a problem.

21 I just don't see it.

22 DR. GENTZKOW: Dr. Bernheim referenced behavioral
23 economics before. That, I think, is in my area of expertise.

24 Behavioral economics, as we were just talking about, says
25 that consumers are at risk and can frequently make decisions,

1 like clicking on a button, without fully understanding the
2 consequences of it.

3 And the consequences -- we're setting something up where
4 the consequences of a user clicking on a button that they don't
5 fully understand can be quite serious here. And we're also
6 creating a huge economic incentive for app stores to get users
7 to do something that might not be in those users' interest.

8 It's not competition in the form of trying to give those
9 users more value. It's setting up a specific economic
10 incentive to potentially deceive consumers, to get them to do
11 something which may not be in their own interest; there are
12 many examples of that elsewhere in the economy. And that is --
13 tends to be something which does not produce the kind of value
14 that we associate with the company.

15 THE COURT: I find that to be entirely speculative.

16 Look, this is -- you know, this has been Google's strategy
17 in the objections -- the 90 pages of objections -- that there's
18 a terrifying world of chaos and anarchy that's just around the
19 corner if there's competition in the app store market.

20 I don't buy it. I just don't buy it. That's just
21 somebody who doesn't want to change their illegal ways.

22 DR. GENTZKOW: I think it's not --

23 THE COURT: There is going to be a remedy. Okay?

24 And if it causes a period of two years or four years or
25 six years of adjustment, that's -- that's the consequence of

1 having violated the antitrust laws. There is going to be --
2 there's going to be -- we're going to be walking on new terrain
3 for a while. Okay?

4 So that's just -- that's just -- this is the consequence
5 of breaking the antitrust laws. We have to do things in a
6 different way. And you must do things in a different way.
7 That is sort of necessarily true after the verdict.

8 So to, you know, jump up and down as Google has been doing
9 and say, "Well, the different way is inevitably going to be a
10 world nobody wants to live in" is just unfounded. I'm sorry.
11 It's just not -- I mean, it's just equally probable it's going
12 to be, as I said three times already, heaven on earth.

13 So, I mean, competition in our system is presumed to
14 create heaven on earth, much more so than monopolistic conduct,
15 illegal monopolist conduct.

16 But anyway, Dr. Bernheim, is there anything you want to
17 add to some of those points or respond to?

18 DR. BERNHEIM: Sure. First of all, I'd like to
19 correct a misstatement about the remedy.

20 It is not true that the remedy allows another app store to
21 take over the revenue for all of the apps that a customer has
22 through Google Play. It must be that that rival has
23 established relationships, direct relationships with the
24 developers.

25 So it's only a subset of the apps. It's only the ones for

1 which they have the agreement with the developers.

2 I just want to make sure that that --

3 THE COURT: I'm with you. I understand that.

4 DR. BERNHEIM: Okay. Now --

5 THE COURT: Can I just add, what about library
6 porting, specifically?

7 DR. BERNHEIM: Sorry?

8 THE COURT: Library porting, specifically.

9 DR. BERNHEIM: Yes. Library porting, specifically.

10 Addressing some of the concerns that Professor Gentzkow
11 raised with respect to maybe consumers can be induced to make a
12 bad choice, I honestly don't see the distinction that he's
13 making about this not being the case with other competition. I
14 mean, this is a risk of competition in all contexts that,
15 you know, some competitors will try and trick people. It's
16 going to be true here, too. But we think that competition
17 generally is beneficial.

18 The protection that we have here is that, first of all,
19 the consumer must consent explicitly. You can't share
20 anything, you can't shift their apps, unless they consent.

21 And second, in contrast to what we talked about a little
22 while ago, this is opt-in rather than opt-out. Okay? The
23 consumer has to say, yes, affirmatively, you have my permission
24 to do this.

25 So all the factors that Professor Gentzkow and I were

1 agreeing about earlier about the importance of default effects
2 will work to make it so that what he's -- you know, what he's
3 fearing is not going to be as significant.

4 THE COURT: Can I just make sure we're on -- I'm -- I
5 was thinking -- so unlike developers who may have existing
6 relationships with the Play Store and they need to opt out
7 affirmatively, if that's the way I decide to go, in the
8 marketplace, the consumer makes his or her own personal choice
9 about how to acquire an app.

10 So if they love the default option of Google Play Store,
11 then they can stick with that for the rest of their purchasing
12 life. If, for whatever reason, they want to shop around, it's
13 their intentional, knowing, and informed choice to buy an app
14 from another store. And if it turns out that the store serves
15 a bad product or lies or cheats or steals, they just won't go
16 back to that store.

17 I mean, it seems to me that is actually the ultimate
18 safeguard. And, you know, I see the other end, the deceptive
19 conduct, a lot in this courtroom, and it has market
20 consequences. If you get a reputation for being a shady spot,
21 where you download this and your address book is going to get
22 hacked, no one is going to do business with you again. And you
23 know as well as I do that word gets out like wildfire on the
24 internet, sometimes incorrectly, but -- okay.

25 All right. So we agree that the opt-in is really a good

1 protection for the consumer.

2 DR. BERNHEIM: I think it's adequate protection. We
3 understand that no system is going to be perfect.

4 If -- there are a few other things I would say about
5 library porting, if I may.

6 THE COURT: Yes.

7 DR. BERNHEIM: You can think about library porting as
8 consisting of a few different elements.

9 The first element, consider the following scenario: Let's
10 say we've got my app store and somebody has purchased an app
11 through my app store but it was -- I was piggybacking on Google
12 Play, so it's actually Google Play's app -- okay? -- because I
13 didn't have a relationship with the developer.

14 Now I create a relationship with the developer. For that
15 app -- and I know that that customer has that app because I'm
16 the one that facilitated the download. Okay?

17 For that app, the developer should be in a position of
18 going to the user and saying, "Hey, you downloaded it on my
19 site. I will now give you some points if you'll move the
20 ownership over to my store so that, you know, you're coming out
21 ahead."

22 After all, that -- that store made the investment in
23 helping the consumer discover that app. So that's the first
24 piece. Okay.

25 Now you go a little bit beyond that and you say, "Well,

1 what about the other apps?" You've got -- my app store now has
2 other apps that this customer bought through Google Play,
3 didn't download them through my store, but I do have
4 relationships with the developers.

5 Should I be able to solicit the user to shift other apps
6 over to my store?

7 And, I think, the answer is, of course. You can do that
8 now; right? You just go to the user and say, "Just remove the
9 current app from your phone and then re-download it from my
10 website."

11 That is -- that is switching ownership of the app from one
12 app store to another. They can do that now. All we're doing
13 is making that process a bit less friction -- less friction in
14 that process.

15 THE COURT: Okay.

16 DR. BERNHEIM: Okay? And then library porting has a
17 third element, which is the user can go to Google Play and say,
18 "Hey, I want you to give the list of the apps that I have on my
19 phone to this other app store so that they can switch the ones
20 that they now, you know, have direct relationships with
21 developers."

22 This is the one I think that Professor Gentzkow's concern
23 is raising the privacy issues because, otherwise, another app
24 store has no way of getting that information. They're only
25 getting information that, you know, they already know because

1 they were responsible for downloading the app or, you know, the
2 user is affirmatively trying to switch the ownership of some
3 other app.

4 I don't think that the -- that the privacy part of this is
5 a big deal. But if, you know, you were concerned about the
6 privacy part, you know, that piece of it is a separate -- like
7 I said, library porting has these three pieces, and you can
8 kind of think of them as being somewhat separable.

9 THE COURT: Well, here's how I think about it: If
10 you're going to download an app store, you're going to have
11 terms of service, and you're going to have informed,
12 quote/unquote -- because nobody ever reads them -- but informed
13 consent by the user as to what that app store is going to do
14 when it's platformed on your personal device.

15 I think that -- I mean, that is enough to put privacy in
16 the hands of user in a way that they can decide. So if they
17 read -- there's a new app store and they read it and it says,
18 "Oh, no. This app store says it's going to canvass every app I
19 have on my phone and send back a message to the home office. I
20 don't like that," then maybe one point of competition will be,
21 you know, the private app store.

22 That's our -- that's our selling point. We will never ask
23 you to reveal anything about yourself, and that's why you
24 should shop with us. And that's how we're going to
25 differentiate ourselves from everybody else. We don't poke

1 around your phone.

2 So I'm not -- I'm not troubled about the -- it -- the
3 privacy will be in the control of the consumer, as far as I can
4 tell. I've heard nothing, and it's certainly consistent with
5 every other technology app and device I've seen in 10 years on
6 the bench.

7 So, no. You may -- you may raise other points which is,
8 is there truly consumer choice? That's not our issue. So, you
9 know, that's for a different case, but -- okay.

10 All right. I would like to -- we still have Google
11 billing to talk about. We've heard a lot now, Dr. Bernheim, on
12 remedies for past conduct and opening up the market for
13 opportunities to compete fairly, are there any other big-ticket
14 items you want to raise?

15 DR. BERNHEIM: There were a couple of other items that
16 were focused on opening up the market. One of them was for a
17 period of time requiring Google Play to distribute competing
18 app stores. The purpose of this is, again, you don't want to
19 have these remedies -- this portion of the remedy in place for
20 very long.

21 If you are a competing app store, you have two ways of
22 distributing your app. One is through preloading. And, you
23 know, we need to give them enough time to go through a preload
24 cycle, but you can also have, you know, downloads independent
25 of preloading.

1 And the thing about downloads is everybody -- all the
2 Google Android users are kind of trained at this point to go to
3 Google Play, and it's going to take a while to undo that.

4 So if you make these apps available on -- the competing
5 app stores available on Google Play for a limited period of
6 time, you are offsetting the advantage that Google Play has
7 acquired by virtue of its past anticompetitive conduct as the
8 dominant go-to provider of app store distributions. So that
9 would be a temporary provision to provide some offset for that
10 advantage.

11 THE COURT: So how would that work in practice? Let's
12 say there's -- I'm not agreeing -- there's a six-year remedial
13 period. An app store opens up in year four, would a year be
14 sufficient, from an economist point of view, to be -- to
15 require Google to make that app store available?

16 DR. BERNHEIM: Again, it's --

17 THE COURT: Six months? I mean, how much time --

18 DR. BERNHEIM: It's a judgment call, and it's hard to
19 be precise about that.

20 THE COURT: But from an economist point of view,
21 dealing with network effects, what would the estimate be? I
22 know it's an estimate, but --

23 DR. BERNHEIM: You know, this is more of a gut
24 reaction than an estimate.

25 I think, to acquire a robust user base, you're probably

1 talking about a couple of years; but this is a gut reaction. I
2 can't point to hard evidence on the time frame. Unfortunately,
3 this is the part of this -- as I've been saying, the length of
4 time is the part of this that is not an exact science.

5 THE COURT: But it would be the case that, regardless
6 of the period of time, one year, two years, six months, market
7 forces would decide whether that store lives or dies. So if
8 they're on Google Play for a year or two years, they don't get
9 any traction, that's -- then they're done.

10 DR. BERNHEIM: They're done. That's absolutely right.

11 THE COURT: Okay. All right. Okay.

12 And was there anything else on the app store side?

13 DR. BERNHEIM: I'm not thinking of anything, as I sit
14 here.

15 THE COURT: Okay. Dr. Gentzkow, on the posting of
16 competing stores for a certain period of time on Google's
17 website.

18 DR. GENTZKOW: Yeah. So there are a couple of points,
19 that distributing your competitor's products is a form of
20 enforced free riding, which has significant consequences.
21 There's not a technical infrastructure to do this right now, as
22 I understand it; it might require some modifications.

23 But I think the most important point here is potential
24 harm to users coming from the fact that, when a user comes to
25 Google Play, they expect a certain level of security

1 protections. Google has invested a huge amount over time to do
2 security screening in the Play Store to make sure that the apps
3 are safe.

4 And so a question that I think would need to be answered
5 with anything like this is: How do we make sure that any app
6 stores which are offered on the Play Store meet the same kind
7 of security standards, privacy standards, and other standards
8 that people expect when they come to Google Play. That's a
9 much, much harder problem trying to look at an app store and
10 figure out: Is it going to be safe?

11 The Aptoide App Store, the APKPure App Store, one of these
12 app stores that comes to the door and says, "We'd like to be
13 distributed on Google Play," we have to figure out if it's --

14 THE COURT: Let me jump in for a moment. You should
15 jump in, too, if I'm wrong, if I'm recollecting incorrectly,
16 but I'm glad you mentioned this.

17 I want to talk about sideloading and friction and security
18 issues too. So at trial, the testimony about sideloading is
19 Google cannot determine whether a third-party app has been
20 vetted for security purposes if it's just being downloaded on
21 the side.

22 And the answer to -- Google's answer to that was, at least
23 in part, to have 12 to 18 screens, I think it was, telling the
24 user over and over again, "This is all on you. Proceed at your
25 own risk. Click 'yes' 12 times to manifest your desire to

1 proceed at your own risk." So, in other words, they just push
2 it onto the consumer.

3 Why isn't that effectively the answer -- that's too many
4 screens. We'll talk about that in a minute. But why isn't
5 that effectively the answer here?

6 Why is it Google's problem? Google just tells the
7 consumer, "Hey, you're not in our ecosphere anymore so --
8 you're not in our ecosystem anymore, so good luck. It's all on
9 you."

10 What's wrong with that?

11 DR. GENTZKOW: I think because there is this
12 expectation that consumers have and a brand that Google has
13 established saying, "Things we distribute through the Play
14 Store are safe and secure," from the --

15 THE COURT: I understand. But you're telling
16 consumers, "Now you're walking out of the garden. Proceed on
17 your own risk." So you're directly addressing that.

18 You're not subject to, "Whatever we do, you're now on your
19 own. Are you sure you want to do this?"

20 And they say yes or no.

21 Why isn't that the answer?

22 DR. GENTZKOW: I think that would be a step in the
23 right direction, but it would not address the concern fully
24 because distributing any app store that comes along, even --
25 even the, you know, side -- apps downloaded through

sideloading and other channels, there are some security protections in place and so I think the security risk involved in an app store that is downloaded are substantially higher.

THE COURT: Well, let me be clear: If Google is going to have the requirement of making other app stores available within Google Play, it's -- I would imagine it's going to be certainly fine for Google Play to make sure that app is okay, the app itself is not a problem.

So Google is not being to forced to put up malware under the guise of an app store. That is not going to happen. So Google will vet the app store, say, "This looks great, according to all our normal vetting processes. And, Consumer, if you want to walk through that door, you know, go -- go on on your own. That's your choice."

DR. GENTZKOW: Yeah --

THE COURT: How is that a harm to anybody?

DR. GENTZKOW: I think it's just, again, app stores pose particular risks because Google cannot inspect, at that time, what are the -- all of the apps on the store and what will be the apps on the store in the future.

There's also, just to flag a potential harm here to OEMs, because -- and to carriers who currently compete for pre-installation. So right now, OEMs benefit from the fact that app stores that are looking for distribution have to compete for their business to try to get preloaded on the

1 phones. If, for a period of time, all of those app stores can
2 automatically be distributed through Google Play, they are not
3 going to be competing at all or at least certainly as hard --

4 THE COURT: Yes, for 24 months that will be true and
5 that's -- that is the consequence of having an illegal
6 monopoly.

7 I know we've gone to this -- gone around this pole a
8 couple of times but, yes, there are going to be some time for
9 the remedial period when competition may not be perfect from an
10 economist's point of view. That is the nature of remedial
11 work.

12 You've got to repair the damage, and sometimes that means
13 you're going to have a slightly less-than-ideal situation until
14 equilibrium or market forces are restored. So I'm not -- I'm
15 not at all concerned about the fact that for a two-year,
16 whatever, six-year period, things may not be ideal from a
17 competitive point of view because we're making them ideal
18 through that time period. It's just the cost of going forward.

19 DR. GENTZKOW: I would note, respectively, that
20 six years is very, very different from two years --

21 THE COURT: Well, I've already said I'm a little
22 worried about six years. I understand that.

23 DR. GENTZKOW: And I think my role is just to try to
24 highlight the magnitude of these potential harms. I understand
25 it's your job to decide.

1 THE COURT: Let me ask you this -- well, actually,
2 let's close out.

3 Any response to that, Dr. Bernheim?

4 DR. BERNHEIM: Sure. Professor Gentzkow mentioned
5 several arguments. One is that the app stores would be free
6 riding on the Google Play Store because they would be
7 distributed on Google Play for free. Google has emphasized
8 over and over again that the vast majority of the
9 3 million-plus apps on the app store basically free ride
10 because they don't generate any revenue directly for Google
11 Play.

12 So if you've got, you know, 3 million-plus apps that are
13 already free riding and you add a few more stores to that, I
14 just can't imagine that that's a meaningful problem.

15 Technical infrastructure, all we're talking about is
16 putting an app in an app store so that it could be downloaded
17 through the app store. We're not experts in the technical part
18 of this, but I'm having trouble understanding why it can't
19 simply be downloaded as an app.

20 Most of what Professor Gentzkow said focused on security
21 issues. And what I'm troubled by in the arguments that he was
22 making is that it sounds like these are objections to
23 competition. He's saying that there are stores out there that
24 may not be maintaining security standards, and that that is
25 going to be problematic.

1 Well, yes, if you open up competition, I mean, there are
2 security -- things you can do to ensure adequate security. And
3 I know we're going to get to that. But, you know, the security
4 risk that's posed isn't specific to it having been downloaded
5 through the Google Play Store.

6 This is a statement about competitors, and the underlying
7 theme there is that competitors are bad and you shouldn't allow
8 them because they pose security risk.

9 THE COURT: Yes. I mean, to my ear, it sounds very
10 close to saying, "We need to be a monopoly to protect you."

11 DR. BERNHEIM: That is right.

12 THE COURT: And I just don't buy that.

13 DR. GENTZKOW: Could I respond, Your Honor?

14 THE COURT: Yes.

15 DR. GENTZKOW: Just to that point, because I think
16 it's not just competition. I think part of competition is a
17 firm's ability to build their product and their brand and
18 reputation with consumers.

19 If I have a store, Target, that I have developed, that
20 stands for, in consumers' mind, a whole bunch of things that
21 I've worked to build, that's how I compete. Then, being forced
22 to put a bunch of stuff in my Target store that is potentially
23 dangerous -- toys for kids with lead paint -- that are not
24 really consistent with my brand, is undermining competition
25 because it makes it harder for consumers to identify with those

1 brands, and it makes it harder for firms to compete in the
2 marketplace. So I don't think this is just competition.

3 Requiring a competitor to distribute the products of their
4 rivals is a very unusual thing in markets, and it has
5 significant downsides from the perspective of competition.

6 THE COURT: It may be, but this is a tech market and
7 this is a monopolization of a tech market, and I think there is
8 room for innovation, and remedy calls for some creativity and
9 flexibility, given the circumstances. So I'm not at all put
10 off by the fact that this may not happen in the distribution of
11 petroleum products or agricultural products. Different market,
12 different time, different conditions.

13 I wanted to ask -- I don't want to cut anything off you
14 had to add, but there are some -- there were concerns about SIM
15 shipping, feature parity. That would probably all shake out in
16 the provision that would say "You can't have any agreements
17 that would affect" -- okay.

18 DR. BERNHEIM: Conditionality, yes.

19 THE COURT: The last thing I have to say --

20 DR. GENTZKOW: Can I make one point on that, Your
21 Honor?

22 THE COURT: Sure.

23 DR. GENTZKOW: I just want to be clear. Since -- when
24 we talked about before, I believe what we were talking about
25 was, on all of those provisions, something that's restricted to

1 explicit clauses referencing rivals related to exclusivity --

2 THE COURT: You make the lawyer in me nervous when you
3 start putting in modifiers like "explicit."

4 I'm not -- you either say it or you don't. I'm not going
5 to say it has to be a specific word or anything else. But if
6 the intent is to do it, that's enough. You can't do that.

7 DR. GENTZKOW: I just want to make sure that we're
8 clear. There's some language in the proposed injunction about
9 conduct which even disincentivizes, changes the incentives of
10 firms to do those things.

11 THE COURT: Oh, okay. I think I might be able to
12 jump -- I'm not using language like that. I'm writing the
13 injunction.

14 DR. GENTZKOW: I just want to make very clear --

15 THE COURT: I understand what you're saying and I --
16 there are -- I said earlier, I believe at the start, I found
17 some of it to be too open-ended and too vague.

18 Remember, that injunction has to be enforceable in a
19 contempt proceeding, and you can only do that if someone is on
20 clear notice you can't do something. So that is effectively
21 what I'm going to have to do.

22 This may be -- this is the last point I want to raise. If
23 you have anything else, I'm happy to hear from both of you on
24 the app store, but, you know, the security thing. Here is what
25 I'm thinking, and I'm going to just talk out loud here, among

1 friends, for a moment.

2 There is a complicated world of security that, as a
3 district judge, I should not be involved in. Okay?

4 All I want to be involved in is the friction. So there
5 was testimony from, I think, Professor Mickens -- if I'm
6 getting his name right -- about you don't need 12 to 18
7 screens. You can accomplish this in -- I can't remember how
8 many he said -- but a fraction of that. Okay?

9 I want to focus just on that portion. That is all, I
10 think, an injunction could do, is -- I can reduce the friction.
11 It's clear. It's understandable. It's doable based on the
12 evidence done at trial, and I don't need to wade into all of
13 the tremendously complicated, possibly, security issues that
14 lurk behind that.

15 So it seems to me this is part of the app market because
16 there was evidence at trial that the friction Google put into
17 those multiple screens was intentionally done to discourage
18 sideloading, direct loading, and getting apps from a source
19 other than Google's own Play Store.

20 So are you comfortable with the idea that just reducing --
21 and I also think it ties into one of my main themes, which I
22 hope is becoming clear, trust the consumer to make his or her
23 own choice. So if you want to shop outside of Google, and you
24 feel like you're giving up a security blanket, that's fine;
25 just do it knowingly and intelligently. Okay.

1 So I'm perfectly fine having a couple of screens saying
2 you're -- you know, whatever Google is going to say about
3 security and safety.

4 Does that seem okay?

5 I mean, there must be some degree of accommodation between
6 reasonable security and not having it so burdensome.

7 I believe -- I can't remember who it was. It might have been
8 Ms. Kochikar who said, the number of security screens was
9 abysmal. I think that was her word, "abysmal." Her own word.
10 Google's own word. "This is abysmal. We're doing it. This is
11 abysmal."

12 So how do we get to reasonable from abysmal?

13 DR. BERNHEIM: You know, this is venturing into an
14 area where economic expertise is speaking less clearly to the
15 issue because this is about security. You know, I'm not a
16 security expert, and I suspect the other economists are kind of
17 in the same boat.

18 You know, reducing the number of screens, making simple
19 warnings, simple one-time decision, I think the remedy has some
20 language that goes in that direction.

21 That seems reasonable to me. The economic principle that
22 we introduced concerning security, if I could add to that, is
23 basically a parity provision; that if you want to avoid
24 micromanaging everything Google does with respect to security,
25 then one possibility is to say: Look, we're not concerned with

1 the level of what you're doing on security. We're concerned
2 about it being uneven. We're concerned about you doing one
3 thing for Google Play and another thing for your rivals.

4 And if you have some sort of a parity provision that says
5 the same security standards have to apply to both, then you
6 can't have that manipulation, which is what we've seen --

7 THE COURT: Let me just jump in.

8 The way I've been thinking about this is -- I think it's
9 the same concept, but maybe slightly different --
10 nondiscriminatory; in other words, that is the phrase I'm
11 using, but I can't just say that. That's like -- there has to
12 be something in it.

13 So from an economist's point of view, how would you
14 phrase -- it's like a rule, but it can't be so vague that it's
15 subject to a misunderstanding.

16 Is there some way an economist would put that?

17 DR. BERNHEIM: I'm not sure I have an easy solution to
18 that.

19 THE COURT: That might require another proceeding.
20 Okay.

21 Okay. Doctor?

22 DR. GENTZKOW: So I would say, first of all, I
23 agree -- I think I agree that reducing that 15 screens seems
24 appropriate. The state settlement already includes a
25 provision -- which I understand that is not agreed to, but that

1 I think is a good model for what would work here.

2 Under the state settlement, Google has already agreed to
3 reduce the -- that friction down, the key parts of that, this
4 unknown source of setting and warnings and all this stuff, down
5 to one screen.

6 There's just a single screen. It has a, you know,
7 condensed message warning the user, "Click once, you've
8 authorized the source to download things." So I think just to
9 suggest -- I think that achieves the goal.

10 Second --

11 THE COURT: Can I just -- now, your understanding is
12 that's totally divorced from any actual tech issues.

13 In other words, what you're proposing is there will be one
14 screen saying whatever it is: You're leaving the Google
15 ecosystem. You may be subject to problems. Are you okay with
16 this?

17 I'm paraphrasing.

18 DR. GENTZKOW: Yeah.

19 THE COURT: And then after that, they say yes, and
20 they're done, and there's no other friction from Google.

21 DR. GENTZKOW: That is what is in the state
22 settlement. I just want to be clear. There are some -- there
23 are some other things like, for example, if you're using a
24 browser, whenever you download something from a browser, there
25 is usually another wanting that just says: Are you sure you

1 want to download this thing?

2 THE COURT: Oh, sure. Firefox may have its own thing.
3 That's not Google. I'm just talking about Google.

4 DR. GENTZKOW: Chrome also has those things --

5 THE COURT: Okay. Chrome. But that's -- yeah. All
6 right.

7 DR. GENTZKOW: Yeah.

8 So, but I think, essentially, that already has reduced
9 that friction to one screen, and I think that's a good model.

10 I want to respond really strongly to what Dr. Bernheim
11 said about parity, because I think a fundamental issue here is
12 that apps downloaded from these different sources are not
13 equal. The risks associated with an app downloaded from Play
14 and the risk associated with an app -- you know, we're talking
15 about things that extend out to, like, my mother gets a text
16 message that looks like it's from FedEx, and it has a link that
17 says, "Hey, click here to download on app to track your
18 package." And she clicks on it, and an app is installed and it
19 can see her financial information, steal -- so that's what
20 we're talking about.

21 I don't think parity is appropriate in thinking about: We
22 want to have user choice, but what is the information that
23 needs to be provided to the user?

24 It had better be different if Google knows that you
25 clicked a link in a text message and you're coming to a source

1 that looks like that, versus --

2 THE COURT: Well, let me -- my goal is to avoid
3 getting into any of that.

4 I just want to -- the testimony at trial was it's the
5 friction that causes a problem. I don't -- there wasn't
6 testimony at trial that I recall saying sideloading is causing
7 people to lose all their bank account money because it's
8 nothing but, you know, overseas malware.

9 It was really just Google is putting all these screens in
10 to actively discourage people from shopping from another site.
11 That's the antitrust issue. That's what I want to address.

12 I don't see actually any reason to get into the actual,
13 you know, nondiscriminatory, non- -- you know, parity. I
14 just -- I don't -- I don't see that. I mean, I don't see how
15 not addressing that would actually adversely affect the remedy.

16 In other words, why, from an antitrust perspective, would
17 I have to address that? I don't see a reason to. As long as
18 the friction point is eliminated, a consumer knowingly and
19 intelligently volunteers to download, isn't that the end of the
20 issue from an antitrust point of view?

21 DR. BERNHEIM: Well, I think you have to be, again,
22 worried about conduct that is not the same as the conduct that
23 we observed but conduct that Google could switch to that
24 accomplishes the same end.

25 If Google is in a position to start declaring, you know,

1 all competing stores' security risks, then, you know, there's a
2 problem with that.

3 DR. GENTZKOW: If I could say --

4 THE COURT: In other words, putting the warning screen
5 up on every store to kind of scare people at the get-go?

6 DR. BERNHEIM: Yeah. So when Professor Gentzkow is
7 making the point that, in an ideal world, you would use the
8 information that some app stores are presenting greater risks
9 than others and you'd fine-tune that, and that you need to be
10 able to discriminate to do that.

11 And that is true about the ideal world, but I think what
12 we learned through the trial is that Google abuses the
13 discretion to do that when they have the ability to
14 discriminate. They do lots of things that make it difficult
15 for competitors. They don't make that decision based on what's
16 ideal for customers. They make that decision based on what
17 delivers the greatest profits to Google, what enlarges Google's
18 slice of the pie; and that is what we have to worry about.

19 THE COURT: Well, I -- I agree to -- on the concept.
20 But what I'm suggesting is the reasonable accommodation is
21 instead of the abysmal -- quote/unquote, abysmal 12- or
22 16-screen forced march, you have one screen and one screen
23 only.

24 Isn't that -- that seems reasonable from an antitrust
25 perspective. I think it is perfectly fine for Google to say:

1 Just be aware, this is not our product. Don't call me when
2 something bad happens. It's not our thing. Please indicate
3 affirmatively you understand this by clicking "yes," and then
4 have a great time in the app store.

5 I mean, what's wrong with that?

6 DR. BERNHEIM: Well, deciding how far to go on this is
7 certainly a judgment call and --

8 THE COURT: But I'm just saying, from an antitrust,
9 anticompetitive conduct, that seems to solve the issue of the
10 friction point.

11 DR. BERNHEIM: Narrowly construed, yes.

12 THE COURT: All right.

13 DR. BERNHEIM: The concern would be, more generally,
14 the friction point is about manipulating security issues to
15 discriminate against competitors. Using security issues as a
16 smoke screen for disadvantaging competitors. And that would be
17 the logic of having a nondiscrimination requirement here, is
18 you can do whatever you want with security but you can't do it
19 in a way that disadvantages the competitors.

20 THE COURT: Okay. Okay. To my ear, that wraps up app
21 billing store.

22 DR. GENTZKOW: Could I make one --

23 THE COURT: Yeah, closing point.

24 DR. GENTZKOW: -- point on that, Your Honor?

25 THE COURT: Yes, please.

1 DR. GENTZKOW: Is that okay?

2 THE COURT: Yeah.

3 DR. GENTZKOW: I would --

4 THE COURT: Or app distribution store, not app
5 billing.

6 DR. GENTZKOW: Yeah, if I could, just on the security
7 stuff.

8 THE COURT: Yes. Yep. Go ahead.

9 DR. GENTZKOW: All right. So I think, number one, I
10 just want to flag that tying Google's hands on dealing with
11 security in order to deal with hypothetical future
12 anticompetitive new things they might dream up to do is a
13 really risky proposition.

14 THE COURT: I agree with that, and I don't intend to
15 do it. I'm just going to say --

16 DR. GENTZKOW: That's great --

17 THE COURT: -- you have to reduce --

18 DR. GENTZKOW: I understood --

19 THE COURT: However, let me just be clear, we're
20 reducing the abysmal experience designed to discourage people
21 from not using Google Play Store; that was anticompetitive.
22 But if it turns out that the one screen becomes a Trojan horse,
23 the injunction is going to have a period of time when people
24 come back to me.

25 DR. GENTZKOW: Yeah.

1 THE COURT: So that's --

2 DR. GENTZKOW: Yeah, I think that's appropriate.

3 And so, just two other small points.

4 One, I think it's important -- you mentioned consumer
5 choice -- just that Google have the discretion to base those
6 warnings on signals that they have about the security risks of
7 different kinds of apps. And there are cases where Google has
8 information that a particular app -- like in the example I
9 described -- has actual specific red flags associated with it
10 that make it a higher risk, and having some discretion to
11 reasonably deal with those kinds of cases, I think, is
12 important.

13 And then last, I would just note that that example about
14 the app sideloaded on a phone that is stealing financial
15 information was not a hypothetical example. There is something
16 called the FluBot virus that did that, and was distributed --

17 THE COURT: No, I -- I'm quite aware of that. But
18 that can happen on a Google phone with no third party involved.
19 If your mother or my mother pushes that thing, it's going to
20 happen. It doesn't matter whether it's in an app store or not.

21 DR. GENTZKOW: We're just trying to make it less
22 likely to happen.

23 THE COURT: Yeah. So, I mean, everybody is equally
24 vulnerable, is my point.

25 DR. GENTZKOW: We don't want to make them more

1 vulnerable.

2 THE COURT: We're not. They're equally vulnerable,
3 but anyway.

4 Okay. Can we move to Google billing? Is that going to be
5 a different team?

6 Okay.

7 DR. TADELIS: Same team, different name. Steven
8 Tadelis.

9 THE COURT: Tadelis.

10 DR. TADELIS: Thank you, Your Honor.

11 THE COURT: Of course. All right. This one may be a
12 little more straightforward, I don't know, but --

13 DR. TADELIS: Straightforward, I would probably say.

14 THE COURT: So I think we have the benefit now of how
15 concrete and specific I would like the discussion to be, so
16 I'll let you take it from there.

17 DR. TADELIS: I will be very concrete and specific.

18 So Remedy Number 1, the jury found an illegal tie. The
19 remedy should be to sever the tie. And when I use the term
20 "sever the tie," I mean, it in two ways.

21 First, the physical severing, so, no, you don't need to
22 use Google Play Billing in any form or shape.

23 And two, I mean a lack of an economic tie that Google
24 could do through strategically engineering prices in a way that
25 would basically discourage the use of alternative billing

solutions.

The second, the jury found that Google willingly engaged in anticompetitive conduct to establish or maintain monopoly in billing. As part of the remedy there, no anti-steering -- so to allow the developers to steer users to use different ways of paying.

And then, finally, making sure that through the -- all the other levers of power that Google has, not to undermine these two remedies. Simple.

THE COURT: Well, okay, let -- we need to unpack all that.

So for severing the tie, the proposition would be a developer is perfectly free to bill for in-app services using any system they want -- their own, Stripe -- you know, whoever -- or Google.

DR. TADELIS: Correct.

THE COURT: Okay. So that's Proposition 1.

The developers are perfectly free to tell customers who may be paying through Google Pay, "why don't you try us? We'll give you frequent-flyer points or whatever. It's going to be a lower -- lower price" -- whatever they work out.

Okay. That's fine.

Here is the issue that has been bothering me since trial. So there was an abundance of testimony that, even under this user-choice proposal, Google was still asking developers to pay

1 something like 27 percent. It was about a 3 percent discount,
2 which turned out to be nothing, because if you don't use Google
3 Play, you've got to pay somebody, and that usually paid them 3
4 or 4 percent. So you ended up still paying 30 percent, it's
5 just that only 27 percent went to Google as opposed to the full
6 30.

7 So what do you do about that 27 percent?

8 DR. TADELIS: So it was 26, but who's counting.

9 THE COURT: Yeah. All right. Okay. You are, you're
10 the economist.

11 DR. TADELIS: So I have no beef with Google charging
12 26 percent or 16 percent or 73 percent for whatever they want
13 to charge on distribution.

14 My beef is with the delta between charging without Google
15 Play Billing and charging with Google Play Billing.

16 In other words, the added fee to use Google Play Billing,
17 on top of all the other benefits they claim developers are
18 getting, should be no less than the cost for Google to deliver
19 those services; and currently that 4 percent is less than their
20 cost.

21 So going exactly to your concern, if I'm a developer and
22 now Google is offering me user-choice billing -- which,
23 importantly, does not sever the tie physically; user-choice
24 billing says you could use something else in addition to Google
25 Play Billing.

1 THE COURT: I'm with you on that. Let's assume --

2 DR. TADELIS: But let's assume there is --

3 THE COURT: It's all gone.

4 DR. TADELIS: -- a tie but they just --

5 THE COURT: It's a new day. A developer can do
6 anything he or she wants.

7 DR. TADELIS: Perfect.

8 And then Google says, "If you want to use our system
9 completely, including Google Play Billing, you'll pay us, say,
10 30 percent. If you don't want to use Google Play Billing,
11 you're going to pay us 26 percent" -- which means that to not
12 use Google Play Billing, it would only be beneficial for a
13 developer if they could find a payment solution product that is
14 less than 4 percent.

15 That doesn't exist today because the costs of a billing
16 solution product are higher than 4 percent.

17 THE COURT: Well, then how would you formulate what
18 Google could do?

19 DR. TADELIS: So from testimony I gave at trial and
20 documents that Google produced, Google's -- Google currently
21 believes that their average cost is about 6 percent. So that
22 would be a floor on what they could charge for the added use of
23 Google Play Billing.

24 In the remedy, there's actually a call for Google to
25 release that number to the -- I forget the name of the

1 committee. It's not the audit committee --

2 THE COURT: Yeah. I should jump in.

3 We're not doing committees.

4 DR. TADELIS: Okay.

5 THE COURT: If there's an issue with enforcement, you
6 will turn to the Court, but I'm not --

7 DR. TADELIS: Then Google will --

8 THE COURT: We're not -- that's -- that's way too much
9 for this case.

10 But I'm not sure I'm understanding. So here's what I'm
11 thinking: A developer decides to use her own billing system.
12 It's a completely self-contained ecosystem. You buy through my
13 app, you pay me through my billing system. Okay. Nothing to
14 do with Google other than being on the Google --

15 DR. TADELIS: It was like a different app store?

16 THE COURT: Well, no, they're -- they're on a Google
17 app store --

18 DR. TADELIS: Oh, they're on a Google app store.

19 THE COURT: -- but they're going to do all of their
20 business with you, financially, as a user, through their own
21 in-app billing service that doesn't use Google Pay.

22 So you're saying that Google should be able to charge that
23 developer 6 percent of that transaction?

24 DR. TADELIS: No. I'm saying that Google would not be
25 charging them for billing. I'm not preventing Google from

1 charging for the fact that they have been discovered through
2 Google Play -- the Google Play Store, et cetera.

3 If Google is providing -- let's make it simple -- two
4 different services, distribute through Google Play, don't use
5 Google Play Billing, there's going to be a fee for that.

6 THE COURT: And how does this stop -- how is that fee
7 to be set?

8 DR. TADELIS: Google decides what that fee is.

9 THE COURT: Okay. And the idea is that if Google sets
10 it too high, the developer will just opt out?

11 DR. TADELIS: The developer might choose not to
12 distribute through Google Play.

13 THE COURT: Okay. So I don't have to be involved in
14 regulating that fee at all?

15 DR. TADELIS: Absolutely not.

16 THE COURT: Okay. So in other words, your proposal is
17 just -- just -- just decouple billing --

18 DR. TADELIS: It's decoupling --

19 THE COURT: -- from Google billing.

20 DR. TADELIS: -- and making sure that the extra cost
21 to use Google Play Billing is no less -- the extra price, or
22 fee, to use Google Play Billing is no less than the cost for
23 Google to provide that product.

24 THE COURT: Why do I have to give antitrust attention
25 to that?

1 If the developer can do whatever he or she wants, what
2 difference does it make?

3 DR. TADELIS: Could I direct you to one of the slides
4 that I actually used in testimony, Your Honor?

5 THE COURT: I don't have that here.

6 DR. TADELIS: Oh, no. It's in the -- oh, sorry.

7 (Pause in proceedings.)

8 THE COURT: Okay.

9 DR. TADELIS: This is Slide Number 8 --

10 THE COURT: Yes.

11 DR. TADELIS: -- in my slide deck.

12 This is a slide that I used in my testimony, and it --
13 it's a slide that comes from Google. I have added on what you
14 see here in red.

15 And what Google did in this slide, as part of their
16 internal deliberations, they called it game theorizing price
17 level. "Game theory" is a fancy word for a set of tools to
18 analyze strategic interactions. So this is basically
19 strategically choosing a price level.

20 They start by saying: Some large developers would take
21 advantage of billing optionality no matter the price.

22 What they mean by that is, they'll say, "You can use
23 Google Play Billing. We're charging you 30 percent. If you
24 don't use Google Play Billing, we're still charging you
25 30 percent."

1 They might still choose to do that. That's that initial
2 jump you see at the very left where it goes, like, from zero to
3 the core strategic asset. And that's trying to describe those
4 developers who would choose their own billing system regardless
5 of the fee.

6 Now, what they next do is show that you have to give
7 enough of a discount -- that's what you call on the billing
8 optionality discount on top -- to reach that zone where you see
9 the blue line curving up; that's when developers would start
10 integrating alternative billing solutions.

11 So what's the idea there?

12 So let's take the current user choice billing that we
13 know. Google says: If you're not using Google Play Billing,
14 we're only going to charge you 26 percent. Use whatever you
15 want.

16 Now, of course, if any billing solution is going to cost
17 me more than 4 percent, I, as a developer, would make a mistake
18 by choosing that, so I'll just stick with Google Play Billing.
19 That's why that blueline is not budging when you go from 30 to
20 26.

21 It's only when you go to something, and again, if this
22 graph is done to scale, which I'm assuming here, you'd have to
23 go down to something like 22, 21 percent to start getting that
24 pickup -- which makes sense because if you would actually turn
25 to what is Slide 3 in the deck that I just gave you, you see